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“Mastery for Service.”

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EDITORIAL.

There is always a feeling of pleasure which mingles with that of sadness when the last official words must be written and the reins of office handed over to the next Editor.

It is only natural to experience that feeling of relief which comes from being relieved of a somewhat burdensome position, but there is, on the other hand, a feeling of regret that more was not done to further the interests of the MAGAZINE. At the end of a year on the

College publication, time enough has about elapsed for the Editor to see his many weaknesses, weaknesses of tact, of system, of organization, and of literary ability, many of which might be strengthened were he to remain in that position another term.

However, the time for farewell is here, and the time for action is past. The year has been a pleasant one in spite of the troubles inseparable from such a position, and the Editor wishes to

thank the students for the co-operation they have shown in helping to publish the MAGAZINE. During the year an effort was made to have as many students as possible contribute to the MAGAZINE. Whether this has been attended with success as to the quality of the MAGAZINE remains for our readers to decide.

He wishes to express his sincere thanks to the lady members of the Board for the keen interest they have taken. The members from the Girls' Building have excelled themselves this term in being willing, prompt and efficient. Special mention should be made of the Editors for Science and Teachers who have done their *best* to help forward the work of the MAGAZINE, and in saying farewell to them officially, he expresses the hope that their best efforts will be tendered the next Editor.

It would be the height of ingratitude to neglect mentioning the almost super-human and successful efforts of our Advertising Manager to sustain the financial status of the MAGAZINE. He has spared neither time nor energy in keeping up the revenue derived from the advertisements, which make possible this MAGAZINE, and to him, too, the Editor officially says *farewell*. The Business Manager has been work personified, and to him the thanks not only of the Editor, but of the whole Board, are due for his earnest and untiring efforts.

To the Associate Editor, long may he flourish, farewell. You have aided more than you yourself will ever admit, not only by your writings, but by your close personal friendship and encouragement at all times.

To all other members of the Board, he expresses his gratitude and hopes that the year spent together in carrying on this ever important work may not have been without its profitable experiences and pleasures.

Once more, to one and all, *Thanks*, and *Best Wishes for a Happy and Prosperous New Year*.



Our connection with the College MAGAZINE will soon be a thing of the past.

Twenty years hence, some other one will be writing exactly the self-same truth.

That is a thought which makes one think. Twenty years hence seems a long time, a long, long time, but twenty years hence that time will have come. In what light will our well-meant but feeble efforts of to-day then appear.

If we are still alive and in the full possession of our normal faculties, what judgment shall we pass upon the efforts of twenty years ago?

Everyone of us knows, feels and admits that the College MAGAZINE is the channel whereby the current events of College life may be tabulated, enlarged upon and translated for the benefit of us all into black and white. It is the means of enabling those who have something to say on the topics of the day to say it.

The College MAGAZINE is all this and something more.

It is the historical account of the evolution—or devolution—of student life, of student activities, and of student ideas.

It is the autobiography, it is the diary of a composite student body. It is the link connecting the successive generations of students with the first link forged in the Alma Mater chain.

Viewed from this standpoint, our College MAGAZINE takes upon itself an imperishable dignity: for were its existence blotted out, the history of our student life would be but a memory in the minds of those of each contemporary period.

Our MAGAZINE is the students' "Hansard," and to those who will in a future generation frequent our Halls, Lecture Rooms and Laboratories, it must stand as the living epistle of our doings.

When in the stress and turmoil of a busy world we shall in the future turn over the pages of that which we knew as the College MAGAZINE, the self-same pages will breathe to us the spirit of the past; they will be to us as messages

from the friends of the days of long ago.

Let us then, each one of us, each individual unit in the composite body of students, play our part in securing that those pages of our College history which are being written by us, and lived by us, shall be worthy of ourselves, in harmony with the ideals of a great and glorious College life, and a vital inspiration to those who shall come after us.

The New Year.

The year like a ship in the distance
Comes over life's mystical sea.
We know not what change of existence
'Tis bringing to you and to me.
But we wave out the ship that is leaving
And we welcome the ship coming in,
Although it be loaded with grieving,
With trouble, or losses, or sin.

Old year passing over the border,
And fading away from our view;
All idleness, sloth, and disorder,
All hatred and spite go with you.
All bitterness, gloom and repining
Down into your stronghold are cast,
Sail out where the sunsets are shining,
Sail out with them into the past

The new ship comes nearer and nearer,
We know not what freight she may
hold;
Hope stands at the helm there to steer
her,
Our hearts are courageous and bold.
Sail in with new joys and new sorrows,
Sail in with new banners unfurled,
Sail in with unwritten to-morrows,
Sail in with new tasks for the world.

—ELLA WHEELER WILCOX.



*Seed Corn for *Ensilage*.*

By L. C. Raymond, B.S.A., Cereal Department.



CORN has been proclaimed King among the crops of the land. Whether rightly or wrongly exalted to such an important place, it is undoubtedly one of our greatest food-crops, useful, alike, to both human and animal kind. As a food for stock, particularly as ensilage, its use is steadily increasing, and rightly so; for the silo, when properly managed, unquestionably furnishes one of the cheapest and most palatable roughage feeds for stock. Ensilage growers in Quebec are frequently confronted with the difficulty of obtaining good seed. As the value of the crops depends very largely on the quality of the seed sown, this short article will aim to set down a few of the more salient features to be borne in mind when purchasing seed corn for ensilage.

Source of Seed:—Southwestern Ontario is very properly known as the

corn belt of Canada. The two counties of Essex and Kent plant an acreage of approximately one hundred and forty-seven thousand acres which produces about eleven and one-half million bushels. This yields in the vicinity of seventy-eight bushels per acre as an average for two counties. These two counties grow almost exclusively dent corns. Farther East, the four closely adjoining counties each produce from a million to a million and one half bushels of corn per year. In this section we have a considerable area devoted to flint corns, although dents are grown to a limited extent.

For the past five or six years there has been an increased interest shown in producing a good quality of seed which will be adapted for the sections in which it is to be grown.

Since 1908 an annual fair has been held in the winter, devoted entirely to corn. To one accustomed to the usual interest

shown at local fairs this is a revelation. Exhibitors crowd the ring-side while the judging is going on, to study the best types and gather any information possible on the best methods of selection; while the knowledge displayed of each individual ear in a ten ear sample is almost incredible to the uninitiated. Classes of instruction and lectures from prominent corn men go hand in hand with the exhibition, thus enabling the grower to select corn suitable for

A number of factors demand further study in S.W. Ontario to insure good seed corn. Little work has been done yet in establishing proper houses for drying the corn. As a result, when we get a bad season we get corn that is off in germination. This particular question is now being pushed by Government aid and material improvement may soon be looked for.

Corn, properly handled, necessitates a very great deal of work and must



Fig. I.—The Secretary of one of the Corn Clubs in his half-cut Breeding Block of Wisconsin No. 7.

those sections which his seed will supply.

Marked improvement and keener interest has been the result of the money spent in connection with the Fair. There are now Clubs which devote all their energies to the production of one variety and aim to excel therein.

Last year, one corn dealer in this vicinity shipped over one hundred car-loads of seed corn—a large portion of it coming to Quebec and Eastern Ontario. Thus far farmers in the East have been able to deal directly with the grower—cutting out all profits of middlemen.

necessarily cost considerable to produce. Well selected seed corn will represent about fifteen to twenty per cent of the total yield per acre. Consequently, if we would have more reliable seed we must be prepared to pay a good price for it, remembering always that we will not require so much, as a lighter seeding will be ample with corn of superior quality.

Varieties recommended:—Six varieties are recommended for use in Quebec—three dents and three flints. The dent varieties are Early Leaming, Wisconsin No. 7 and Early White Cap Yellow Dent.

For ensilage purposes there is comparatively little difference in the value of the three. The Wisconsin is the best bred corn while the Leaming is probably the poorest. White Cap will probably give ensilage of a little higher quality than the other two, but the yield will be smaller and in addition the plant is somewhat inclined to lodge. The three flints are represented in the varieties known as Compton's Early, North Dakota and Longfellow. Of these the first one is decidedly the latest, producing a heavy stalk and a very large

satisfaction. Lack of a definite standard for varieties necessitates considerable care in ordering, *e.g.*, both Leaming and White Cap corn have early and late strains. The early strain alone is of use under our conditions. While only six varieties have been mentioned, it does not follow that there are no others as good; few, however, are produced in quantities sufficient to warrant their general recommendation.

Obtaining Seed:—It may be laid down as a principle to be followed without exception that seed corn should be

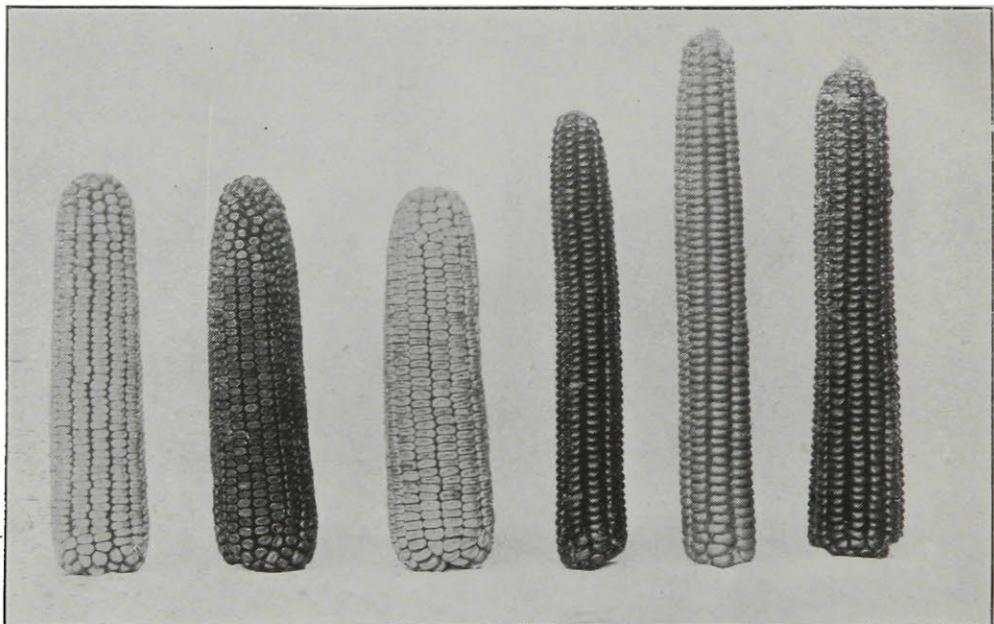


Fig. II.—Ensilage Corns—(from left to right) Early White Cap, Early Leaming, Wisconsin No. 7, Longfellow, North Dakota and Compton's Early.

ear. North Dakota and Longfellow mature at about the same time and are practically the earliest ensilage corns on the market.

Under Quebec conditions it is absolutely essential to avoid all late and very large growing varieties. We should get a variety that will reach the glazing stage without difficulty in the average season. A practice frequently recommended is that of seeding one early and one late variety in separate blocks. By mixing as they go into the silo this system will, on the average, give the best

bought on the cob. Once corn is removed from its natural position on the cob, it deteriorates rapidly, especially under adverse conditions, and can never be depended on to give the same strength of germination. Furthermore, one is insured of a better quality of corn if he can see the ear from which it has been produced. Shelled corn always contains a large proportion of kernels which could not be sold as seed on the cob. In spite of this fact recent statistics show that Quebec only buys about one fifteenth of her seed corn on



Fig. III.—The Wrong and the Right way of Buying Seed Corn for Ensilage.

the cob. Shelled seed, as a rule, sells a little cheaper than when on the cob, but is much less reliable and requires correspondingly a heavier seeding per acre.

In shelling corn for seed, the cobs should first have the butt and tip kernels removed to insure a uniform grade of corn for planting. The illustration shows an ear of Wisconsin No. 7 prepared in the proper way. This practice is absolutely essential to a uniform drop in planting corn by the check row method.

After having removed all butts and tips a very good practice to follow is that of shelling each ear separately. With all the grain from one ear in a pan one can readily tell whether or not it is all good viable seed. With the best of care an occasional ear will creep in which is not quite up to standard. By the foregoing method such ears can be readily detected and eliminated.

Unless the ears are shelled in the way just indicated it is essential that we test them for germination so as to get a definite idea of the percentage that will grow. Any flat box filled with sand will serve the purpose. Six kernels should be taken from each ear, two from each

end and two from the middle, turning the ear so as to get kernels from all sides of it. By a simple system of labelling a record can readily be kept of each ear and any faulty ones discarded. In

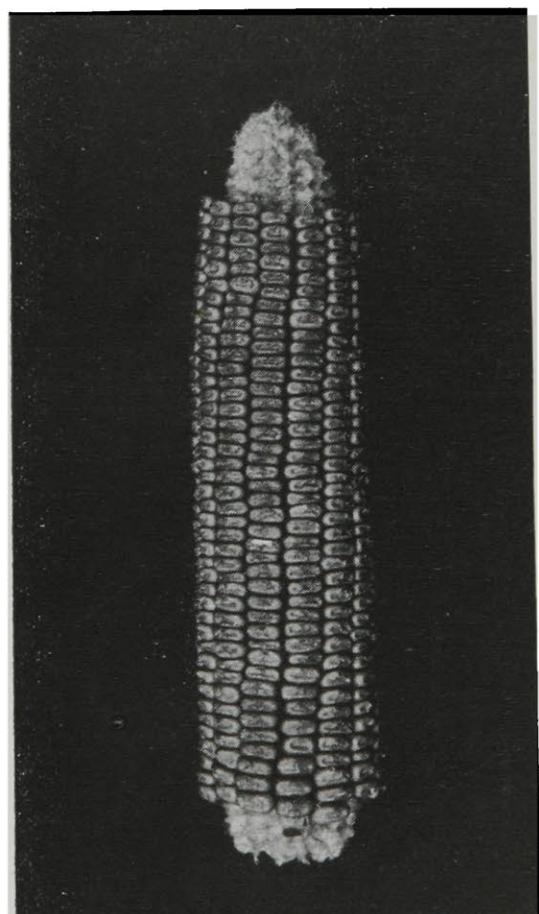


Fig. IV.—An ear of Wisconsin No. 7 with butts and tips removed ready for Shelling.

shelled samples it is necessary to get representative kernels from all parts of the lot. The larger the number of grains

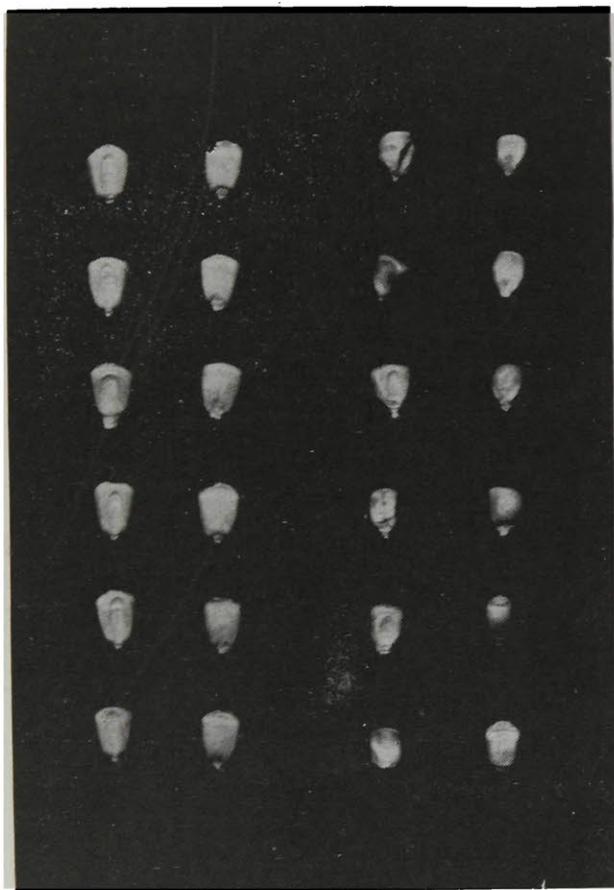


Fig. V.—Left rows, kernels from main portion of ear. Right rows, kernels from butts and tips. Uniformity in size of kernels is essential to an even drop with a planter.

tested the more reliable will be the results.

Rates of Planting.—The method of planting corn has a very direct bearing

on the amount of seed to be sown. Two methods are in common use—the drill and the check row. A very common failing in Quebec is to seed in the drill and seed entirely too thickly. Drill seeding is not altogether to be condemned provided it is sufficiently thin. The stalks should not be closer than eight and not further than twelve inches apart in the row.

The check row is a decidedly superior way of planting corn. The larger ensilage corn should be planted in hills, forty-two inches apart each way. This gives a splendid opportunity to cultivate both ways, thereby saving moisture and ridding the farm of weeds. Further, it effects a very marked saving in the quantity of seed per acre and will give in return better matured corn for the silo.

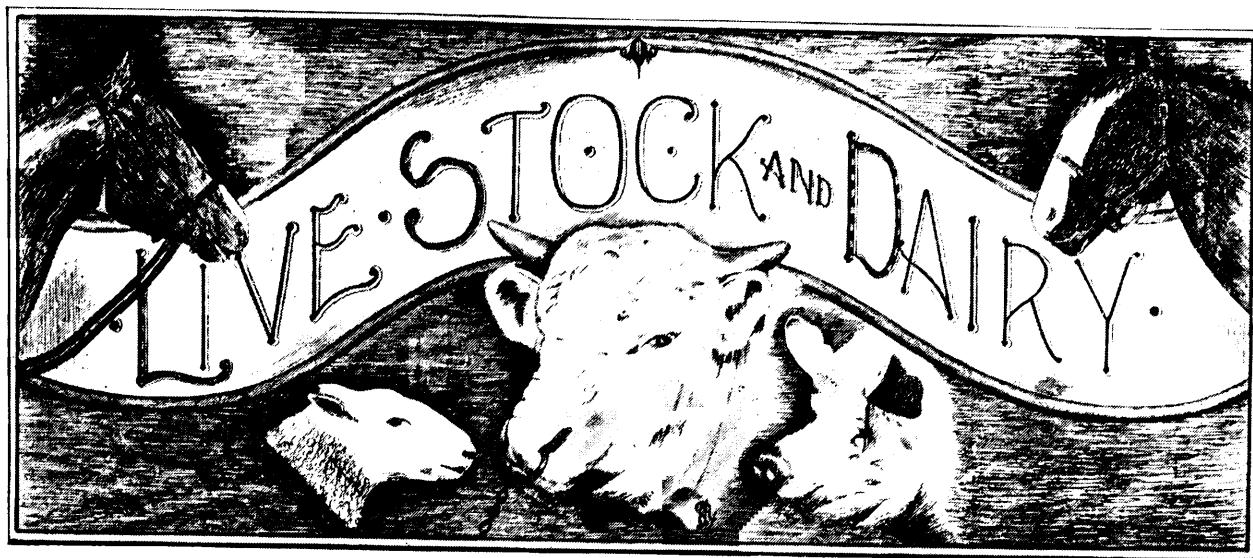
Until quite recently it has been difficult to obtain planters which were sufficiently well adjusted to check row corn evenly. This, however, has been overcome, and nearly all of the implement manufacturers have reliable machines on sale.

In conclusion, let us remember that quality in seed corn is of utmost importance, and that, as a rule, the high-priced seed is infinitely the better proposition.

What's the Use?

A man who saw how the farmers were cheated
Showed them the game and how they could beat it;
Some of them laughed and others looked grim,
But all asked: "What is there in it for him?"

At last he got sick of his foolish campaign
Since no one would act there was nothing to gain;
Then the farmers all wakened and started to scoff:
"Just what we expected! They've bought him off!"



Horse Breeding on the Farm.

LORSE Breeding is a business that most Canadian farmers could engage in with almost a certainty of profit if undertaken in an intelligent and business-like manner. But to the observant horseman it is very evident that not even the fundamental principles of horse breeding are understood by the great majority of our farmers. If our breeders would take a more lively interest in horse raising, the stock of horses of this country would soon be materially improved. It should not take one with ordinary intelligence very long to realize that it costs practically as much to raise a poor horse as a good one, and yet because it costs a few more dollars for the services of a good stallion, and because it costs a little more to feed the colt well, we find vast numbers of colts raised annually at a loss to their owners.

It is in the quality of the animal raised that the margin of profit is found. An ill-shaped, poor fed animal of no particular breeding, will, when sold at three or four years of age, yield but small profit at best and is often sold at a loss,

while on the other hand, a well-bred, well-fed animal will in nearly every case return a good margin of profit.

There are in general demand to-day four different types of horses, viz. :— heavy draft, carriage, roadsters, and saddle horses. The raising of fast trotting horses should not be followed by any farmer, as it is an almost certain road to financial ruin. The average farmer has neither the time nor the ability to so train an animal of the trotting breeds as to make him an extremely likely animal in his own class.

Of the different classes, the draft horse is much the safest proposition. He develops more rapidly and becomes serviceable at an earlier age than do individuals of other classes. This is no small advantage, and an animal of the draft breed often reduces in the aggregate the total cost of its upkeep to a saleable age. Also the farmer, who is not an expert in the general management of horses, stands a much better chance of success when handling horses of the draft breeds. Horses of this class are not so liable to blemish as are individuals of the lighter breeds, and if

blemished their usefulness and market value are not diminished to anything like the same extent. Perhaps, however, the greatest argument in favour of the breeding of draft horses is that there is no limit to the demand for well-bred, well built draft animals, and young horses of good size and quality at three years or over will command the highest prices in the markets.

The automobile has, of course, hit this class as it has the other classes, but not to so great an extent, no doubt chiefly because the demand for draft horses is greater than for other classes. While we notice on all sides that the automobile is performing work formerly done by the heavy drafter, still there is no doubt in the minds of those who are in a position to know that the auto can never replace the draft horse in the present generation at least, and we have it on good authority that many business houses in the cities who were loud in their praises of the auto a few years ago are now returning to the draft horse, claiming that he is more efficient and cheaper than the auto. The very fact that prices paid for the draft horses during the last two or three years were as high or higher as at any time for many years is ample proof that the popularity of this animal is not diminishing.

In breeding draft horses, there are certain important features requiring special attention on the part of the breeder. The horse to be bred from should, of course, not only be a pedigreed animal but his pedigree should show that he is descended from a good string of ancestors. He should be typical of the breed he represents, possessing lots of size, substance, quality and good action. He should be masculine in appearance, showing lots of character about the head and neck ; the latter should be full and strong, his

shoulders sloping and well muscled; back, short, strong and well muscled over the loin; chest deep and full; body deep, possessing a well-sprung rib of good length showing plenty of capacity for food; croup should be broad, fairly long, well muscled and not drooping; quarters broad, strong and heavily muscled; the legs should be clean and free from any meatiness, possessing flat, hard, flinty bone ; the hock must be large, strong smooth, clean, and all parts clearly defined ; the pasterns should be sloping and of medium length ; the feet should be of medium size, with a strong hoof, wide heel, concave sole, large and elastic frog.

The action of the drafter, as in the other breeds, is a very important feature. He should walk and trot with a good stride, which should be more or less free and elastic, lifting his feet up well and setting them firmly down again, and should not travel either too close or too far apart. The feet should neither toe in nor out as these are objectionable features always.

Other things being equal, the dam which is a pure bred is superior to the grade mare as a breeder ; nevertheless, excellent drafters may be raised from good grade mares bred to stallions of the breed they most nearly represent. It is very important that the dam be a good individual. If both sire and dam are good individuals and properly mated, the chances are excellent for a good foal to be produced, provided of course that the dam is properly cared for during the period of gestation. She must have lots of good nourishing food, be kept in good physical condition, and receive lots of exercise (work which is not too severe being the very best).

As foaling time approaches, the mare should be placed in a roomy box-stall which is clean and well ventilated, and

carefully watched until the foal is born and the attendant is satisfied that it is capable of looking after itself. During the first five months of its life the foal should run with its mother, preferably in a good pasture. The dam should not be expected to do any work during the first three or four weeks after foaling and not to work regularly or hard at any time during the summer. The mare should, if necessary, be fed a liberal supply of oats and bran to supplement the pasturage crop, so as to provide as much milk as possible for the young foal, as the first few months, and especially the first few weeks, is the most critical period of the foal's life. As soon as the foal is old enough, it should be fed daily some oats and bran mixed, and after weaning (at about five months in most cases) it should get good pasture if possible and a liberal allowance of grain twice daily. Feeders differ as regards the proper amount to feed, but about six quarts of bran and oats is generally conceded to be fairly good feeding for the average colt during the winter months of its first year. Any changes in the feed should be carefully made; the sudden changing from one feed to another often causes injurious results. It is also important that the colt be fed

some roots regularly through the winter, be given all the water it wants, and exercise every day if the weather permits. A large box-stall in which the colt may be kept loose is much to be preferred to tying.

No person is more favourably situated for the production of first class draft horses than is the present-day farmer. He raises practically all his own food-stuffs to be fed during the winter months and has, generally, a large pasture during the summer months, providing plenty of good grass, pure water, and exercise, all of which form an ideal condition for the growing of large, strong, healthy colts. Also, as before mentioned, the young colt can be worked at an early age, and if properly handled and not loaded too heavily, can with profit do a considerable amount of work before he is three years of age.

With proper breeding, good care of the dam during the period of gestation, careful handling of the dam and foal during the first few months of the latter's life, good feed and water during the winter months, together with plenty of exercise, there is no reason why the average farmer should not derive a good income from the raising of draft horses.

J. H. KING, Agr., '16.



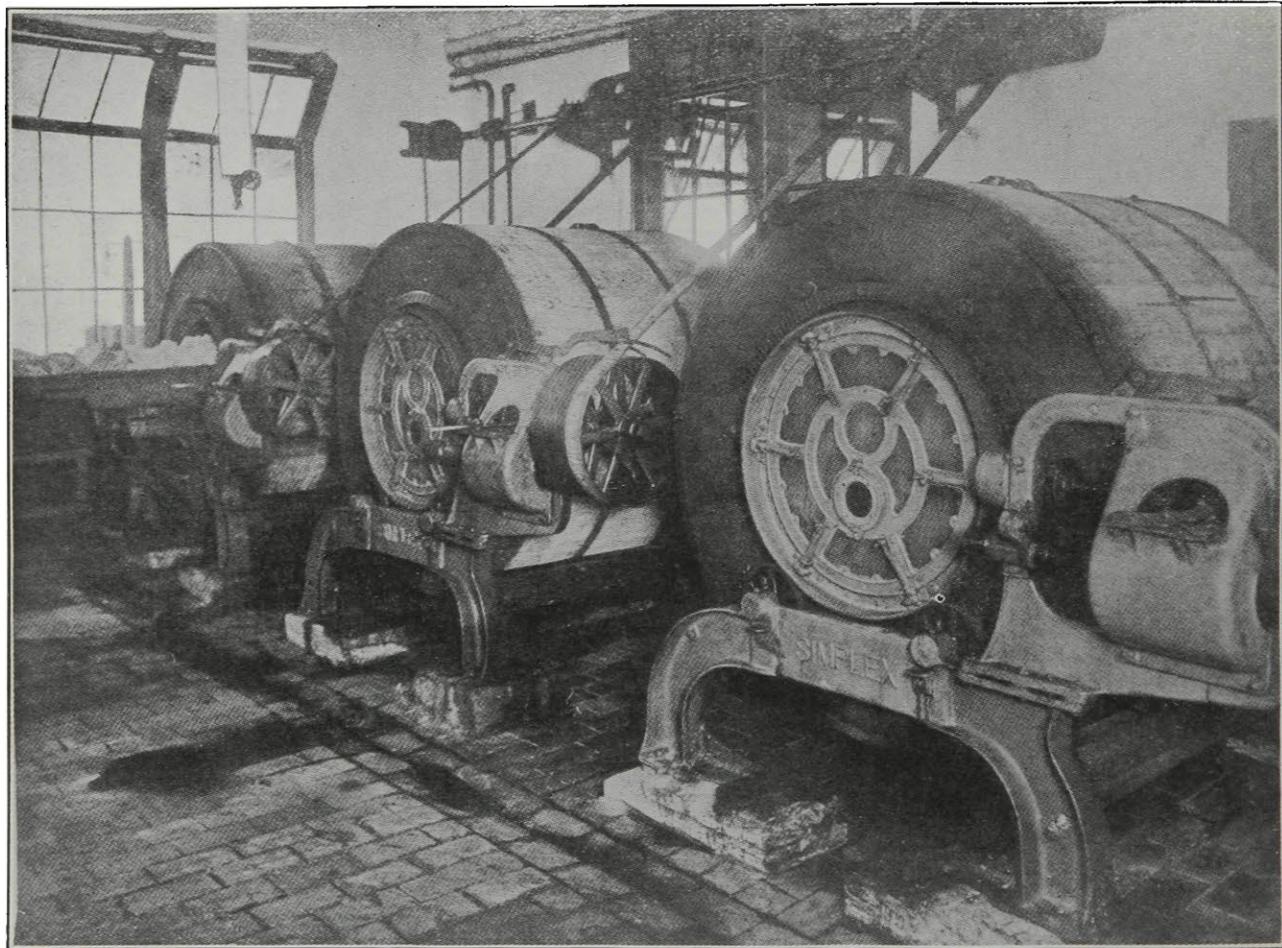
A Friend of Them All.

Government Control for Butter.

HOLLAND is one of the many countries which manufacture fresh butter for the London market. For years the Dutch butter had a very poor name, and dealers had to be satisfied with a lower price in order to dispose of their products. Conditions

came together and organized an association. Members of the association agreed to produce butter of a certain quality and containing less than 16% water and in return they were allowed to affix a certain stamp to their butter.

The association established testing laboratories in convenient centres and



A Butter Factory in Friesland.

went from bad to worse, for the dairymen, in order to make a profit in spite of the low prices, adulterated their product more and more, and were in a fair way to kill the export trade of Dutch butter altogether.

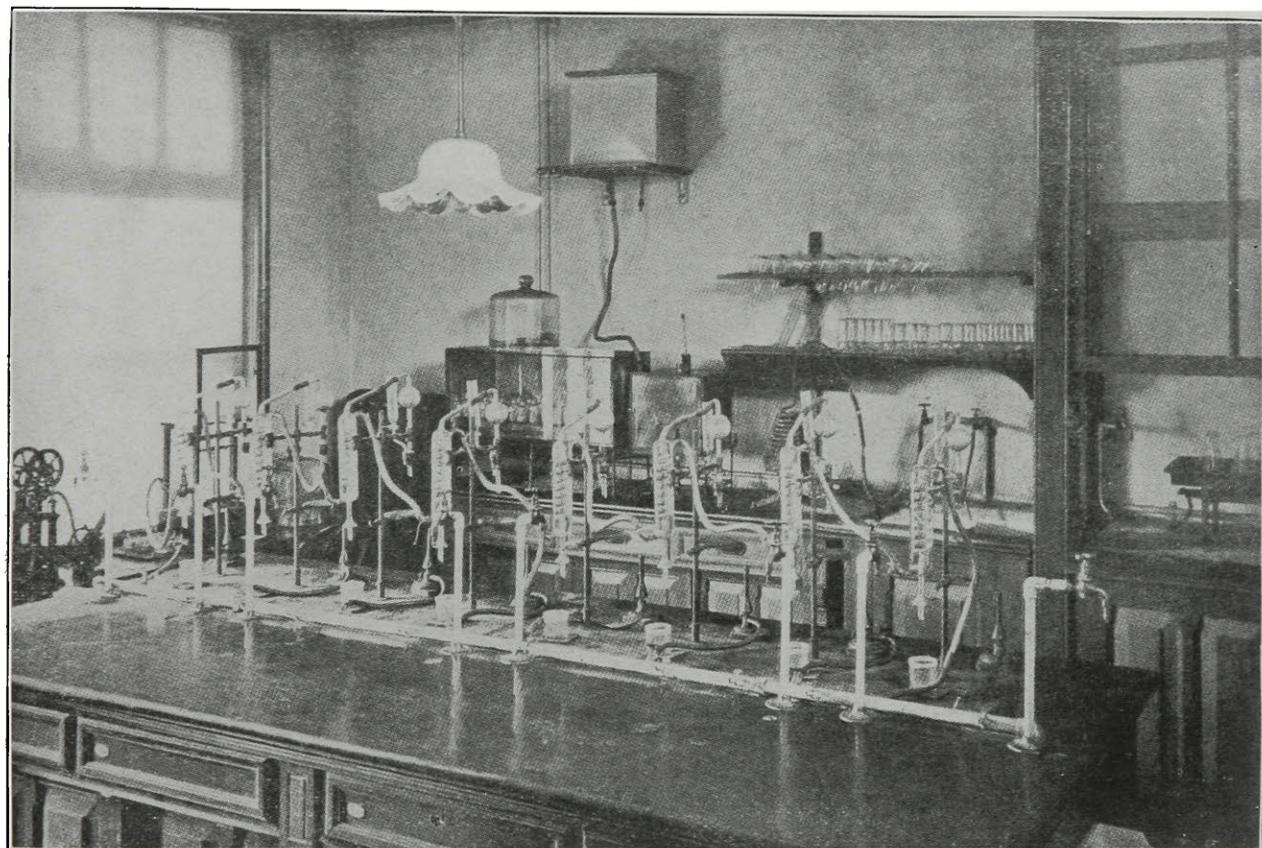
Before this calamity could take place a number of the leading manufacturers

once a fortnight the butter of each member was analysed, and the public invited to make use of these stations to have butter examined free of charge. The expenses of the system were covered by a small tax of 0.1 cent per lb. of butter produced.

The association lived through some

very difficult years, for not only was their stamp unknown, but as soon as it received recognition on the butter market outsiders began to imitate it, using a similar stamp for their inferior product and doing in that way much harm to the association. Luckily the Dutch government had been watching with much interest the growth of the association and offered support under condition that the rules should be remodelled along certain

quantity of butter to be sold in one lot. Size one was butter in a quantity of 2 lbs. or less and further sizes were for quantities up to 6 lbs., 36 lbs., 76 lbs., and the largest for quantities over 76 lbs. The paper cannot be removed from the butter without tearing it to pieces and thus there is no fear that the stamp will be removed from one lot of butter to another. The government registers all the serial numbers and their



Butter Testing Laboratory.

lines. These changes were rather stringent and seemed to involve a considerable amount of red tape, but by a liberal interpretation have worked out very well in practice.

The government supplied a mark stamped on a piece of parchment paper and a sharp pointed die, with which the paper was stuck to the butter. The paper was provided with a serial number and made in five sizes dependent on the

date of distribution, and this enables the officials to trace a case of adulteration to its proper source in record time. The punishment for non-compliance with the rules is a fine of \$500 and ejection from the association. Each member has deposited at least \$500 with the treasurer so that the collection of the fine is always assured.

The latest figures are not at our disposal, but a couple of years ago there

were eight central stations, controlling 100 million lbs. of butter, produced by 870 members. These stations examined yearly 30,000 samples for complete analyses and 20,000 samples for water

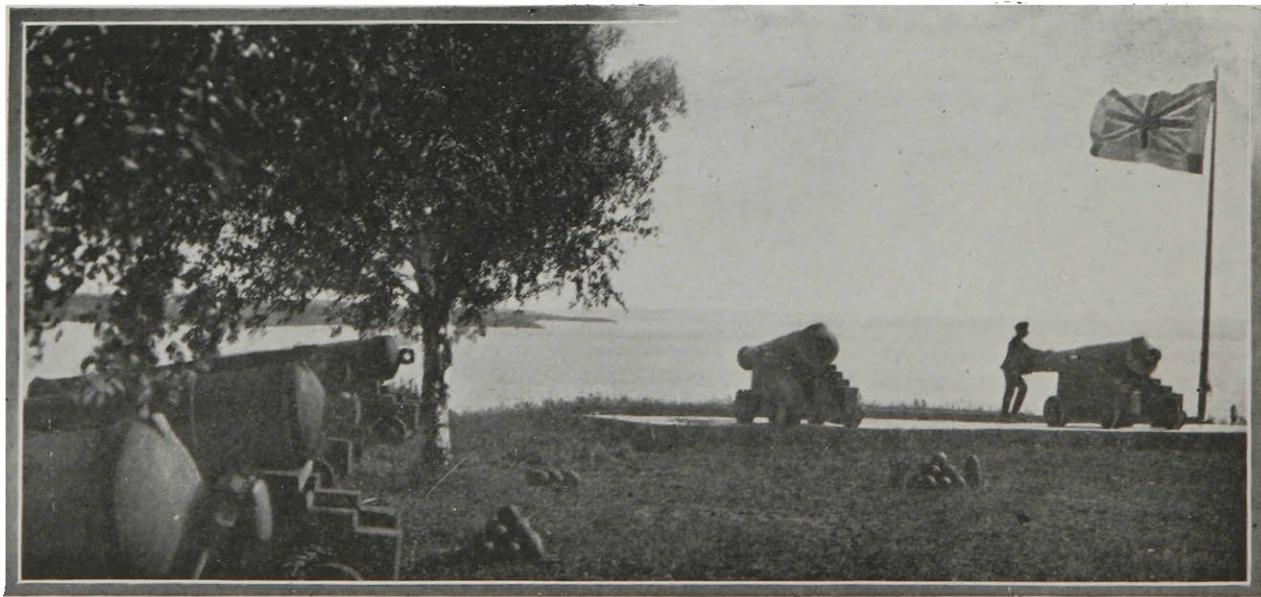


percentage. The total yearly expense was from 0.15 cent per lb. in the outlying districts to 0.02 cent per lb. in the large butter centres. The benefit of this control has been tremendous. All but-

ter carrying the government stamp receives the same treatment from the buyers, independent from the fact as to who the producer is. Such butter demands $1\frac{1}{2}$ cents per lb. more than the unmarked butter, an increase of one million dollars in yearly returns, and in several countries unstamped butter is at present altogether unsaleable.

It would appear from these facts that the government control has been very beneficial and has produced startling results in a very short time. But we must realize that the country was more than ripe for the innovation when the government took the matter in hand. As a matter of fact the butter-makers had already made a start on a small scale. Such methods copied in other countries might find considerable opposition and the originator might become disappointed unless he realises the changed conditions.

J. VANDERLECK, Ch.E.



Fortifications at Digby, Nova Scotia.



The Honey Bee and its Management.



HE object of this article is not to go into the finer details of bee-keeping, but to give a general outline on the care and management of bees.

Bee-keeping in Canada is receiving more consideration now than ever before. Still, there are a large number of people who do not recognize the importance of bees. They are invaluable to the farm, orchard and garden. There is an enormous amount of nectar going to waste each year which might be gathered by bees and stored away as honey. And there is no doubt that a large amount of seed and fruit is lost owing to the absence of bees to fertilize the flowers.

Apart from their importance in the fertilization of flowers, the results of their labor may be made profitable to their owner, as honey usually brings a good price, generally from 15 to 25 cents per pound for comb honey and from 10 to 20 cents per pound for extracted honey (retail prices).

It does not require a large outlay of money to commence bee-keeping. It is a great mistake to start with a large

number of hives. Begin with a few colonies and gradually work up.

The best time to start bee-keeping is in the spring, about the middle of May. The first thing is to decide upon the locality for your apiary, whether it is in a good place, where the bees are within easy reach of good supplies of nectar throughout the entire season. The apiary should be protected from the prevailing winds. For this purpose a shelter may be erected. The hives should be placed so that the sun may strike them in the early morning. There are several ways of placing the hives. One good way is to place them in rows, about eight feet apart, and six feet in the rows.

In procuring bees, a single colony or several colonies can be purchased, or a swarm may be obtained from a neighbouring bee-keeper, but be sure that the bees come from an apiary that is *free from disease*. This is very important, and bees from a diseased apiary should be absolutely refused.

A large amount of equipment is not necessary for the beginner. A suitable building to store apparatus in and to do the work necessary for the production of

honey is required. The hive that is most generally used is the Langstroth hive. This hive consists of a wooden box with a loose bottom and cover. They are made to hold eight or ten frames. The above constitute one storey and act as the brood chamber. To produce surplus honey other stories or supers can be placed on the brood chamber ; if comb honey is wanted the super will be shallow, containing sections for comb honey ; if extracted honey is required, the super may be shallow or as deep as the brood chamber and contain frames. A few other things are required, such as veil, gloves and a hive tool to loosen up the frames in the hive. A screwdriver is suitable for this purpose. A smoker is also required. To enable one to handle bees, some method must be used to pacify them. This is effected by means of a few puffs of smoke. Feeders are also necessary, as bees sometimes require feeding in the fall and spring.

There are several races of honey bees, but the two most common ones are the black bees and the Italian bees. The Italians are easily recognized by the yellow bands on their abdomen ; and on account of their excellent qualities are replacing the common black bee. They are easily handled, and, as a rule, winter well; they also seem to resist disease better. A good strong colony consists of about 35,000 worker bees, several drones and a single queen. The queen can easily be recognized by her greater length and slender shape. She is responsible for the production of eggs which are cared for by the worker bees.

In producing a queen, an ordinary worker cell is chosen, usually near the edge of the comb; it is enlarged and the walls thickened and built up to form the large queen cell. It takes about 16 days from the time the egg is laid to the

time when the young queen emerges. A few days after emergence the young queen leaves the hive on her nuptial flight and returns fertilized for the rest of her life, which may be for five years. She is most prolific during the second and third years. After the third year she should be replaced by a younger queen. The workers are undeveloped females ; they carry on all the work of the hive, gathering in supplies, building comb, caring for the queen and brood.

The males or drones are useless in the hive, their only function is to insure the fertilization of the queen. They usually appear about May, and in the fall are ejected from the hive by the worker bees.

Care should be used in handling bees at all times, gentleness is required when examining the frames and bees. When inspecting the hive take the frames out one at a time and examine, then replace. See that they are properly spaced to allow the bees ready access to both sides of the comb. This can be done without any danger of being stung if gentleness is observed.

When colonies are weak or queenless it may be found necessary to unite them to make strong colonies, more especially in the fall, when nearly everything depends upon their going into winter quarters in a strong, healthy condition, with plenty of young bees. If weak colonies are to be united, the weaker one should gradually be moved nearer to the stronger one until they stand side by side. If both colonies have queens, the queen should be caged and the better one should be left in her cage from 36 to 48 hours until the strange bees get used to her. The other queen should be kept in case the first one is killed by the bees, which may sometimes happen. Before uniting, smoke both hives strongly, then remove the frames from the weak

to the stronger hive. The bees should be examined about half an hour later, and if they seem to be quarrelsome another vigorous smoking should be given. It is preferable to unite during a honey flow. Swarms can easily be united by simply throwing them down together in front of the hive.

The natural increase of colonies is by swarming. When a hive becomes overcrowded, a young queen is raised and the old queen goes out with the swarm. They sometimes fly long distances, or get into some place where it is hard to get at them. To prevent this some bee-keepers practice clipping the wings of the queen. This prevents her from flying away with the swarm, and when she comes out of the hive she can easily be captured. The bees will not fly far without her, but light on some tree or bush close to the hive. The parent hive is removed and the swarm placed in a new hive which is placed then on the old stand, the bees out in the field will enter it when they return. The queen can then be placed in with them. The parent colony should then have all queen cells removed except one, and the reduction of numbers caused by the bees entering the new hive will usually prevent a second swarm from issuing. Some use queen traps in front of the hive to prevent the queen going out with the swarm.

To forestall swarming, the following method is practiced: a few days before a swarm is expected to emerge, the old hive is removed to some little distance and a new one put in its place. One or two frames of brood are then taken from the old hive and placed in the new hive. Be sure that one or two queen cells are on the comb. This should be done about the middle of the day when most of the bees are out in the field; when they return they will enter the new hive and

will rear the young queens and brood. The old queen is left in the parent hive, so all other queen cells should be removed from that hive.

Feeding.—There are two chief reasons for feeding bees. Sometimes to stimulate brood raising in the spring when supplies are short, or to make up the requisite amount of supplies for the winter. Feeding in the fall is not good bee-keeping, unless the latter part of the season has been a poor one. It shows that the bees have been robbed of surplus that should have been left.

Either honey or syrup can be used for feeding. If honey is used be sure that it comes from an apiary *free from disease*. Syrup can be made from granulated sugar. Only the best should be used. For spring feeding use equal parts of sugar and water by weight or volume. For winter feeding use two parts sugar to one part water. Boil the mixture gently till all the sugar is dissolved. Great care should be taken to avoid burning, as the slightest burning will prove injurious to the bees.

The bees should be examined about the middle of September to find out what supplies they have. A good strong colony should have from 25 to 30 pounds of capped honey. There is about five pounds in a well filled frame. If they are short it will be necessary to feed one pound of syrup for every pound of honey they are short of the required amount.

To carry bees successfully through the winter, the hive must be well filled with young bees, there must be a good supply of stores, and the queen should be a young prolific one to give the colony a good start in the spring. In those localities where the winters are mild enough to permit outdoor wintering, some protection is necessary. This can be supplied by taking a large packing

case and placing a layer of chaff or other packing material on the bottom, the hive can be placed on this and sides and top well packed with chaff. Be sure that the entrance of the hive is left open and in communication with an opening cut in the side of the box. The great danger to guard against in both out and indoor wintering is dampness.

In most parts of Canada it is advisable to winter bees indoors. A part of the cellar can be partitioned off for this purpose. Shelves should be fixed up for the hives to stand on, do not place them on the floor. The cellar should be fitted with ventilators to regulate the temperature, which should be kept between 40 degrees F. and 50 degrees F. The bee cellar should be fixed so that there can be no vibration to disturb the bees.

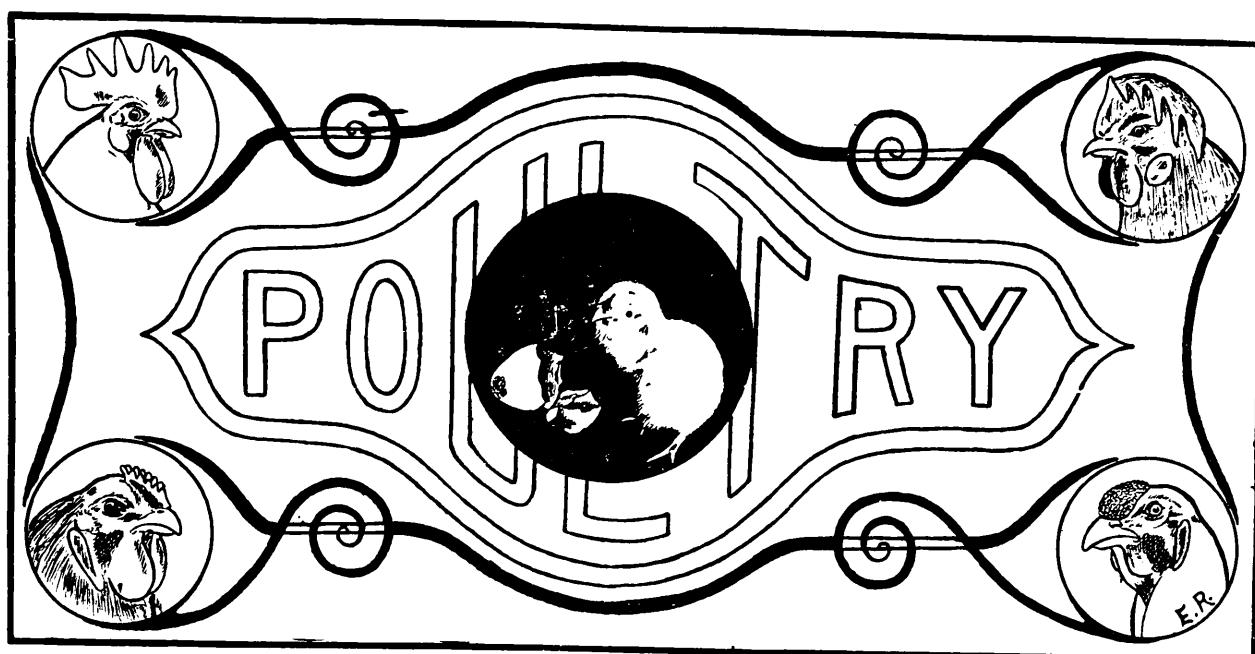
Diseases.—Of all the diseases, the two affecting the brood, which are known as the American foul brood and European foul brood, are the most serious. The two diseases alone cause an immense loss to bee-keepers. The American foul brood attacks the larvae when full grown, and fills the cell. At first a brownish discoloration is noticed, the larvae sinks down into the cell and becomes darker in color. If a match or wooden toothpick is inserted into the larvae, then withdrawn, the contents of the larvae will be drawn out in strings. The caps of the cells shrink down and are sometimes perforated. The European foul brood spreads more rapidly than the former, and usually attacks the larvae at an earlier stage. The discoloration is more of a yellow than brown, and as the larvae dries up it becomes a distinct yellow. Very little ropiness is shown in this disease. An offensive odor is usually present. These diseases can be prevented by not feeding honey from other apiaries unless it is absolutely known

that they are *free from disease*. Honey is the chief medium in which the disease is carried. Prevent the bees from robbing, as far as possible. Never buy second-hand supplies from any apiary unless it is *free from disease*.

Treatment.—Remove the bees from infected hives, combs and brood, into a clean hive. They are then forced to use what honey they may have in the production of wax. The infected honey when extracted is fit for human consumption, but great care should be used to prevent the bees gaining access to it. The combs may be melted down and safely used for comb foundation. The hives must be thoroughly scraped and cleaned and disinfected in the following manner. The hives are tiered up one above the other and kerozene or gasoline poured on them. Place some straw inside them and burn for a short time, then extinguish the flames. The hives are then fit for use after a little cleaning. All frames should be destroyed, and dividing boards and implements used in the work should be boiled for half-an-hour in water.

Dysentery.—On opening the hives in the spring, the frames and combs will sometimes be found to be spotted with a brownish yellow excrement. The disease only occurs in the winter and appears to be due to the bees having consumed honey of a poor quality, and to the close confinement. Usually after the first flight in the spring they are all right. Feed only honey or sugar of the best grade. There are several other enemies of the bee, but space prevents them from being discussed in this article. The writer hopes that these few remarks may encourage some one who has not already tried to keep bees to keep bees, to keep better bees and keep bees better.

C. B. GOODERHAM, '16.



Co-operative Marketing and Handling of Eggs.



AT THE present time when the subject of eggs is being discussed so freely by the press and public in general, it might be interesting to site a few of the conclusions reached in relation of consumption to production in the Canadian egg trade, before discussing any possible means whereby we might market our eggs more successfully, thus tending to increase our exports instead of having them decreasing yearly, as we find it at present, due in no small extent to improper handling and the placing of eggs on the market unfit for consumption.

importing yearly and the gradual increase in their consumption. For the year ending March 31, 1913, Quebec alone imported from the United States 812,201 dozen eggs. The increased consumption of eggs per capita is not confined to the city. Farmers generally are eating more eggs than ever before. In many rural districts it is practically impossible to secure fresh meat at certain seasons of the year. At such times eggs are usually plentiful and used freely.

In the cities, with the steadily increasing price of meat, even though eggs may be high in proportion, the fact that eggs are such a wholesome and nourishing food, and that they can be served in such a variety of ways and prepared with such little labour, keeps them in ever constant and increasing demand.

Are we in Canada, an agricultural country, contented to import eggs yearly? Having money pouring out of the country for products that could, with a little care, proper management and at a cost of practically nothing, be retained within our bounds!

	Census, 1891	Census, 1901	Census, 1911
Population of Canada	4,833,239	5,371,315	7,204,838
Poultry Population of Canada	12,696,701	16,562,084	29,548,723
	Doz.	Doz.	Doz.
Total egg production.	64,499,241	84,134,802	123,002,132
Imports of eggs	602,533	951,745	2,378,640
Total consumption...	57,078,839	73,723,483	125,288,608
Average per capita...	11.8	13.72	17.3

From the above figures we can see the tremendous number of eggs we are

A few eggs are still exported, and even at times when the imports were the greatest a considerable quantity was exported, for last year Canada exported 126,854 dozens and imported 13,240,111 dozens. Now, how are we to improve this condition? There seem but two solutions.

A.—By better feeding practices to increase our egg yields per hen.

B.—By a better system of marketing and handling of eggs.

ATTENTION TO DETAILS A FACTOR TO SUCCESS.

The present average egg yield could be easily increased one third, by proper housing and feeding methods. This is a subject that has been given considerable study and one upon which there is a mass of free literature. If we wish to see conditions changed we need not look to the specialized poultryman nor to the back-yard suburban poultryman; but to a general revolutionizing of the entire system on the ordinary farms. For, after all, it is from such farms that we get the majority of our eggs. If each farmer were to increase the size of his flock, the tendency would be for more eggs to be placed in the market, thus lessening our imports, just the thing we wish to see. But is it practical to increase the size of our flocks, when the ones we have are not yielding the returns they should.

Before a man goes heavily into poultry let him make a success with a small flock, gradually increasing the number as his experience and capital increase. To such a person, I do not hesitate in saying that there is no other branch of farming that will pay better, give more pleasure and satisfaction, considering capital invested, than a flock of one hundred hens on the average farm, provided they have ample runs, clean, nourishing food and water.

SUGGESTIONS IN REGARD TO PROPER CARE OF MARKET EGGS.

Marked improvement has been made in the method of handling other food stuffs. But the same old antiquated methods of handling eggs that prevailed many years ago prevail to-day with the majority of producers. Eggs, under average conditions, take a very round-about course in reaching the consumer. Someone on the farm gathers the eggs whenever convenient, sometimes once a day, sometimes two or three times a week. They are then taken to the house and there remain until it is convenient to take them to market.

These are then taken to the country store. Here their quality does not improve since they are often held for various lengths of time and stored in questionable places before being sold or shipped to the city grocer or produce merchant.

Of course, there are careless dealers and commission men, but as a whole eggs receive better treatment in this section of the trade than in any other. So that it is up to the farmer to improve his end of the business. The system that has proven a great success throughout Ontario, New Brunswick and many sections of Quebec, known as "The Co-operative Egg Circle," is indeed a step in the right direction. By this system, a number of farmers in a district join together and agree to bring their eggs at least once a week to a central point. Here the eggs are placed together and shipped immediately to the wholesale dealer. Each person marketing eggs through the Circle procures a rubber stamp with a number on it (each member having a different number) with which he stamps each egg. Then the person in charge of the Circle, knowing each man's number, in case of any complaint from the wholesale dealer,

may look up the person's number and make inquiries into the cause of the complaint.

Egg Circles have proven very successful, not only in cutting down the percentage of unsaleable eggs, but have been able to pay their members on an average of from $2\frac{1}{2}$ to 3 cents per dozen more than could be procured at the local dealer's. It is surprising to think of the increased income that would be obtained from the number of eggs used per year, 125,288,608 dozens, at the increased price of $2\frac{1}{2}$ cents per dozen, which would amount to \$31,322,215 per annum, in addition to the extra money from the sales of all the eggs that are at present placed on the market entirely unfit for consumption, which could have been used if they had received such care as those that are shipped from Egg Circles, thus again lessening our imports and turning our present total waste product into dollars and cents.

Improvement in the care of eggs is important from a financial point of view, in fact, it is a business proposition. There is an enormous financial waste resulting not only from the loss of thousands of dozens and the shrinkage in millions of others, but also from the cost of handling, packing and transport-

ing so much worthless or practically worthless produce. If the manufacturers and the business men of Canada were to take no more care in placing first-class goods on the market than is taken by the majority of farmers in handling and marketing eggs, how long would the average business be prosperous?

It is a shame that a product like eggs, so uniform when produced in quality, is allowed to deteriorate so seriously through neglect and carelessness.

It is evident that if eggs are to reach the consumer's table in a fresh and palatable condition, the present round-about system of handling and marketing them will have to be discontinued and more modern business-like methods adopted.

If you want some winter eggs, heed our
humble rhyme,

Feed us first, feed us last, feed us all
the time.

Leave us not in squalid pens to a filthy
feast,

Clean the perch and premises twice a
week at least.

Should the younger pullets fail, 'tis no
fault—but fate,

If they were not hatched in April they
were born too late.

JOHN C. MOYNAN, '16.

The Greatest Work.

He built a house, time laid it in dust,
He wrote a book, its title now forgot;
He ruled a city, but his name is not
On any tablet graven, or where rust
Can gather from disuse, or marble bust.
He took a child from out a wretched lot,
Who, on the State, dishonor might have
brought,
And reared him to the Christian's hope
and trust.

The boy, to manhood grown, became a
light
To many souls, and preached for human
need
The wondrous love of the Omnipotent.
The work was multiplied like stars at
night
When darkness deepens. Every noble
deed.
Lasts longer than a granite monument.

MACDONALD COLLEGE

EXTENSION WORK FOR

RURAL SCHOOLS

EDITORIAL.



ALL teachers should read professional magazines, and among those that are most helpful to teachers in their daily work is *The School*, published by the Faculty of Education, Toronto University. This is the best Canadian monthly for Canadian teachers. Many rural teachers also find assistance in *The Canadian Teacher*, which is published fortnightly in Toronto, also by the Educational Publishing Company.

Other popular magazines and quarterlies should be used regularly for general information and for illustrations suitable for school children. For instance, the two pages of coloured photographs in the December *Delineator* should be cut out and mounted to illustrate the environment of Jerusalem and also places connected with the life of Christ. This makes an excellent illustration for Scripture teaching.

Similar illustrations can frequently be had from the *National Geographic Magazine*, which should be taken regularly by all public school teachers. Inexpensive and topical illustrations are easily procured and add interest to all teaching.

■ ■ ■

It is commonly believed that country children are healthier and in better physical condition than city children. But such is not necessarily the case, and a recent investigation by a joint committee of the National Council of the American Medical Association proves the opposite. An examination was made of the children in about 2,000 rural districts of Pennsylvania, and the results were compared with a similar examination in the cities of Harrisburg, Pittsburgh, and Altoona. The startling conclusion was reached that rural children were more in need of medical attention than city children. This was true in general, but particular cases also support the same conclusions. In comparing Orange County, Virginia, with New York City, the country children show a much larger percentage of defective livings than the city children, the exact figures being 37% and a fraction of 1% respectively.

Malnutrition is one cause, as the food in rural districts is coarse and less nutritious.

Investigations in England bring to light similar conditions there. But the general result must cause us to reflect seriously on our social conditions in rural districts. Medical Inspection and Supervision is as necessary for the country as for the city.

THE WAR AND ENGLISH COMPOSITION.

Many teachers believe that the average English-speaking pupil cannot write English and that good English style cannot be taught. The war has shown us a new way of looking at this problem because plain soldiers at the front have sent home letters that are written in really good style and language. General French's first account was a letter of extraordinary merit—indeed a model of literary style. Col. Swinton, who writes the "official eye-witness's" letters, has also the literary gift. But the main point is that the letters of the ordinary soldiers, selections of which appear daily in our papers, are excellent examples of directness, clearness, conciseness, and human interest. The absence of slang or of debased language must impress the reader very favourably.

Now, the ordinary soldier is not certainly above the average in education when he enlists, nor is his education developed along literary lines after he becomes a recruit. The fact is that an Englishman can write well enough when he has something to say and some one to tell it to. A Frenchman can write gracefully about airy trifles. He enjoys

it and so does the reader. A German can spin musty cobwebs out of his brain and apparently enjoys the process though the reader hardly enjoys the result. The whole matter exemplifies the psychology of the national mind.

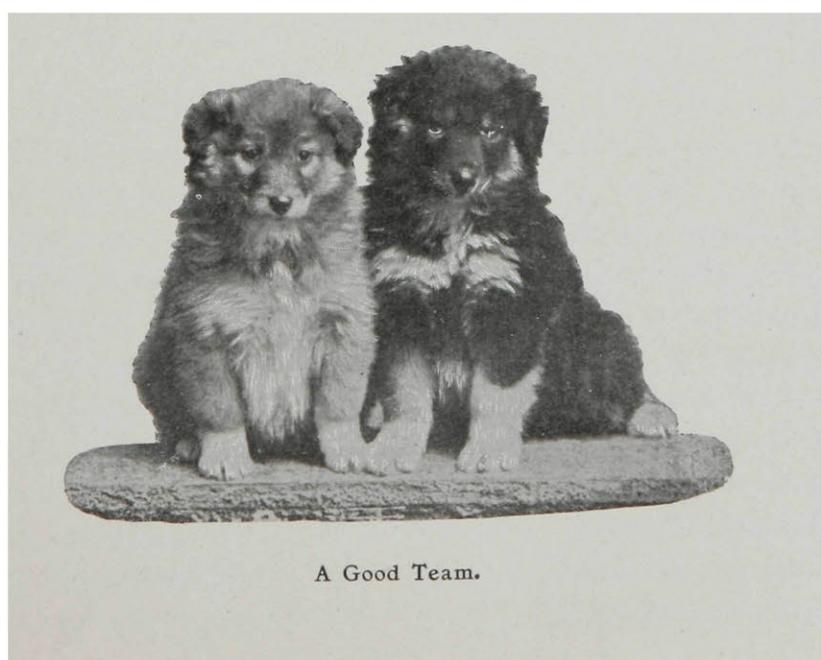
There are at least three lessons from this to be learnt by teachers:—

Firstly. Teachers should only assign as subjects for essays those topics that are real and practical, full of vital meaning and of personal value, and are capable of imaginative treatment.

Secondly. Bravery, winter, and other topics of a similar kind are too abstract. It is far better to give topics that permit of objective treatment.

Thirdly. Better work can be done if a definite person or audience is addressed. Personal experiences of all kinds are good, but should not be the only type of subject. Mr. Hartog, in his book, "The Writing of English," suggests the description of a bicycle or fishing rod for the benefit of a person who has never seen one. Teachers need to be reminded that letterwriting forms one of the best exercises in composition, and that letterwriting is an art that needs to be taught and cultivated.

SINCLAIR LAIRD.



A Scottish Experiment in Rural Education.

A BORDER VILLAGE SCHOOL.

N the little village of Ednam, which, with its population of 500, lies on the border between England and Scotland, an experiment is being conducted that is decidedly interesting in view of the attention devoted to the problem of Rural Education in our own province of Quebec. The district is wholly agricultural, and the boys generally stay on the farms which are mainly arable.

The village school is like one of our village model schools and has two rooms with 87 pupils on the roll. The Headmaster takes 46 pupils of 10 years old and upwards and in the other room an assistant mistress teaches 41 junior pupils. The exceptional feature, however, is the master's wife, who is an uncertificated teacher possessing first-class diplomas for cookery, laundry, and dairy work. She teaches these practical subjects in the afternoon and helps her husband with the backward pupils in the mornings.

GRANTS FOR PRACTICAL WORK.

The elasticity of the Scotch Code and the system of government grants for practical work, especially to pupils over 12 years of age, make this educational experiment possible.

For each child over 12 taking this practical work, a grant of \$12.50 is paid instead of the usual one of \$5.50, and in addition a grant of \$2 is paid for each hundred hours which any pupil in the school devotes to manual instruction, cookery, laundry work, dressmaking, horticulture, dairying, and certain other subjects. Naturally these grants are worth earning.

INTRODUCTION OF PRACTICAL SUBJECTS.

Until Mr. McDonald arrived on the scene, no practical subjects were taught, but he wished to use his wife's unusual but extremely desirable qualifications for the benefit of his school, and so asked the School Board to allow practical instruction to be given in cookery, laundry-work, dressmaking, gardening, wood-work, and dairying.

They agreed, and erected at a cost of \$400 a little brick room, 15 ft. by 14 ft., which provides accommodation for 12 cookery students, and is fitted with a range, a stove, a sink with cold water, a cupboard and shelves, and a table. Here are taught cookery and dairy work to boys and girls, laundry work to girls, and woodwork to boys, who also receive lessons in tools and joinery at the neighbouring carpenter's shop.

All the children over 12 spend two hours every afternoon at one of these subjects. This not only does not cost anything but actually brings in a profit to the board of \$90, as the grants amount to \$415, and Mrs. McDonald's salary is only \$325.

COOKERY AND DAIRY WORK.

She finds the cooking materials and uses or disposes of the cooked dishes. Accounts show that there is no financial loss. During one year she taught the cooking of 40 dinners suitable for a working class home of 3 or 4 persons, costing from 16 to 20 cents. The children work out the cost, sometimes do their own marketing and always keep a careful record. Thus at the end of the year each had recipes and prices for the 40 dinners. The teachers believe firmly in cookery for boys, who enjoy the

work and become excellent cooks. There can be no doubt of the valuable influence of this training on home life.

The dairy work, however, challenges greater attention, because as a result of the experiment and its influence on local farms. Local butter, which formerly sold for 8 cents a pound less than imported Danish butter now sells for the same price because the quality is better.

Previously there was a lack of skill and of proper dairy methods, and the local situation seemed so wrong that the headmaster introduced dairy work.

The necessary cow was presented by a generous donor, who added a separator later when the experiment was successful. A local farmer keeps the cow for \$50 a year and the School Board receives all the milk. This arrangement pays the school well. A servant milks the cow. The milk, the separator and two churns are stored in a little outhouse, but the churning and butter-making are done in the cookery room. The quality of the butter enables it to be sold for the same price as the best imported butter, and this has so impressed the local farmers that they either adopt the superior school methods or send to the school as much of their cream as can be handled by the children, who often in summer churn twice a day.

RESULTS.

The story, however, is not complete yet. For one summer Mrs. McDonald took six pupils to the "Edinburgh and Midlothian Poultry and Dairy Exhibition," where they entered for the butter-making competition. This was open to all comers, the majority of competitors being professional dairymaids. To everybody's surprise, four of the pupils—three girls and a boy—held the first four places and took back to the school in triumph a silver cup which was given in substitution for the usual prizes.

The East of Scotland College of Agriculture sent down an expert to examine the pupils in their course for the Diploma in butter-making.

As the pupils have to take the regular theoretical and practical examinations and reach the required percentage of marks, this is a thorough test of the efficiency of the school-teaching. More can be done with the plastic and receptive pupils in the school than with adults, who have less adaptability and progressiveness.

Only when imported butter has been banished from the markets of Scottish Border towns will this capable headmaster be content.

EFFECT ON OTHER SCHOOL LESSONS.

How is time found for the ordinary subjects? What standard is reached in them? This school is open for three hours in the morning and three hours in the afternoon, but 10 hours a week are devoted to practical work, and this is actually a third of the time.

In practice, it is found that the combination of practical work with ordinary lessons only adds greater interest, value and thoroughness to the ordinary curriculum.

Government inspection shows that the school reaches a standard rarely attained by the best country schools. Even the Drawing and Colour work, which was all, of course, from actual objects, was unusually excellent; but "all the teaching was full of life and vigour and the appeal to experience and environment was made at every point."

Once a week the leading articles of a newspaper are read in class and discussed, and children are trained to use newspapers intelligently for broadening their knowledge and interests. The final test is the Government promotions. Owing to the fact that pupils

are more numerous in lower grades than in higher grades, the Government inspector gives the mark "excellent" to a school if 10% of the number enrolled are promoted from the elementary school proper to the supplementary classes.

At Ednam, though all children over 12 years of age not in the supplementary

classes were spending 10 hours a week on extra practical subjects, 15% in one year passed to the supplementary course.

This surprising fact needs no further comment.

SINCLAIR LAIRD.

The next article will discuss "The Lessons which this Experiment Teaches us in Quebec."



EN grow old because they stop playing, and not conversely, for play is, at bottom, growth."

The large cities are recognizing the ever growing necessity for more play in the life of the children by the establishment of playgrounds and play centres in their midst.

As yet, however, the country districts have no equivalent for the playground of the city, and, at first sight, there seems to be no need for teaching the country children games. Most people, who do not know better, imagine that the country boys and girls do next to nothing else but play; that they are admirably supplied with both inclination and means for all necessary play and physical activity.

We find, however, in looking into conditions in villages and small towns, that although children do play, their repertoire of games is surprisingly small and inadequate. Who is to teach them new ones and see that the mental and moral qualities, so necessary an element in all games, are properly developed?

The only person in the country districts who comes in close contact with all the children seems to be the

teacher. She may feel, at first, that the teaching of games is only adding to her work. On the contrary, however, she will find that, if properly taught, they may become a means of discipline and of gaining an insight into the character of the children that would be impossible in any other way and that will be of infinite value to her in the school-room.

The next thing to a sound body that we should desire for our children is a sound mind to control it. Therefore, every boy and girl should play those games that tend to make the mind the perfect master of the body. These include, first of all, innumerable games of skill, beginning perhaps with the simple games of ball, ring-toss, jackstones, marbles, hop-scotch, hoop-rolling, top-spinning, and concluding with the more complicated games of ball.

There is a further need of boys and girls, beyond health of body and mental control, and that is, certain mental and moral qualities. Every boy and girl should know those games that develop courage, self-respect, admiration of skill, desire for efficiency, sense of justice, the love of fair play, sympathy and sociability.

E. A. ROBERTS.

Games.

Columbia University Summer Session.

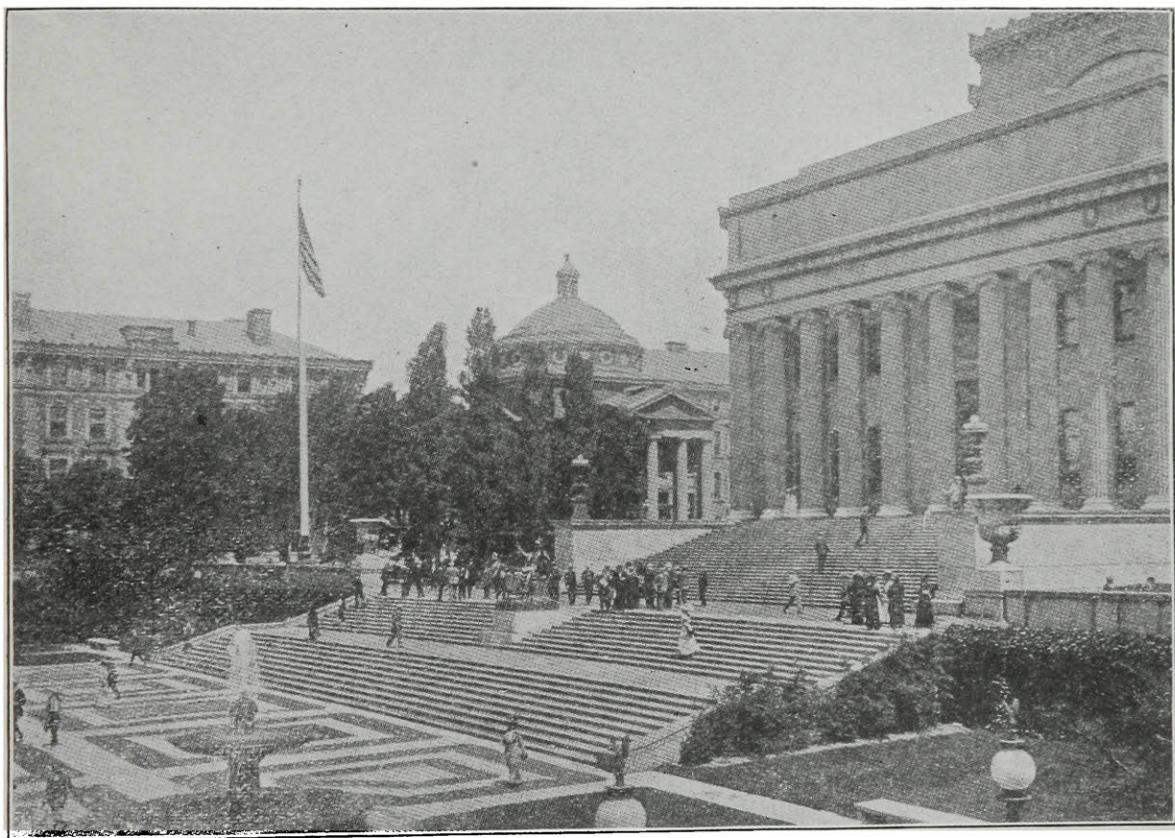


ANY Universities and Colleges have attempted to popularize summer sessions and thus afford opportunities for the busy professional man in school or college to polish up his arms, that he may wage a more effective warfare against ignorance; but it is doubtful if these attempts, in general, have met with that measure of success that they deserve. For one

wide reputation, an equipment of the highest order, accommodation at reasonable rates, for great numbers of students, and attractive surroundings.

All these desiderata are found at Columbia University, New York, which opened her fifteenth summer session on July 6th, 1914, with an enrollment of nearly six thousand students.

These students hailed from the four quarters of the globe, and included men



Mines.

Earl.

Library.

reason or another, the numbers availing themselves of the courses provided have been small; and the sessions have been abandoned or continued in such a half-hearted way as to make them unattractive to the average seeker after knowledge.

In order that they may be a success, there must be the prestige of a great and growing University, a wide diversity of courses, a staff with almost a world-

and women from almost every profession and walk in life, and of every colour and degree of culture.

Here one might see the keen Jap, the inquisitive Chinaman, the thoughtful British-Indian, the jet-black native of the Gold Coast, the dark-brown quadroon or mulatto from the Gulf States, the half-Spanish native of Cuba or Porto Rico, the soft-voiced white Southerner, who has no "r" in her alphabet, natives

of every State of the Union and of every part of the British Empire; all attracted by what Columbia has to offer, and all with a mind to work.

Had one no other mission at Columbia here was a field for the study of humanity rarely afforded.

To meet the varied wants of these thousands, Columbia has gradually added to her courses, until during the last session instruction was offered in two hundred and seventy-eight subjects.

Indeed there is hardly a need of the humblest student of the most elementary subject or of the most successful professional man that is not met, and well met, by a brilliant staff of experts, consisting of nearly three hundred men and women, drawn from the whole United States and beyond.

That the Summer Sessions of Columbia are not merely holiday occasions may be inferred from the fact that lectures go on from 8.30 a.m. to 6 p.m., with evening lectures thrown in, on occasion, while students were gravely informed that they could not carry out the reading required, in less than eight hours per day. That it could not be done in less, the experience of the writer amply proves.

The fact that Columbia has several large residence Halls, and a well-conducted "College Commons," with a cafeteria attached, where meals can be secured at very reasonable rates, adds largely to the attractiveness of the Summer Session.

These Halls, five in number, accommodating over a thousand students, are situated on the College campus or on adjoining streets and are plainly but comfortably furnished.

In the hundreds of near-by apartment houses of a superior class, can be found accommodation for all who are not fortunate enough to secure rooms in the College Halls.

The minimum fees for the Summer Sessions amount to \$35.00, including registration; and the entire cost to the student, to quote from the College Announcement, "in no case need exceed \$120.00."

The social needs of the students are not neglected. Each State has its social club, and the British Empire Club had this summer a membership of about eighty, who met for social intercourse or excursions to places of interest in and around New York. Of the eighty Britishers present, ten were from Montreal and Westmount, one from Macdonald College, and the others from the widely separated dependencies of the Empire.

Provision for readers is ample. The University Library of 550,000 volumes is open every week day from 8.30 a.m. to 10 p.m.

The Bryson Library of Teachers' College, of 65,000 volumes, mostly professional, is open to students during the same hours. The New York City Public Library has a branch in the University Library Building, to supplement the Library of the University. Hamilton Hall has a library of 5,000 volumes; the large law library of Kent Hall is also available; and the Union Theological Seminary of New York places its reading room and splendid library at the disposal of summer students.

While the College campus is very limited in extent, yet recreation is not overlooked. In various buildings or on the campus, there are six gymnasiums, swimming pools, bowling alleys, fencing rooms, base-ball grounds, running-track, and seven tennis courts.

Musical recitals, festivals, open-air theatricals, public lectures, receptions, and excursions to places of interest are provided for those who can snatch time from their more serious occupations to enjoy them.

Religious services are held every morning for half an hour in the College Chapel; and many begin the day by attending.

For inspiration, a broader vision and a healthy conception of how little

a man knows at his best, let him take a Summer Course at Columbia and rub up against her six thousand students and three hundred experts in almost every line of human thought and research.

A. W. KNEELAND.

What to do with an Inattentive Class.



THINK a great many teachers, who find it difficult to keep children interested throughout a lesson, blame themselves for failing to

do what is practically impossible. They think the lesson must be dull, and therefore the children's attention wanders; or they are not strict enough and therefore the class is restless and fidgety. This may be so, but granted the teacher is capable, there is probably a very good reason for it. Normally the instinct of a growing child is not to sit still for any length of time, not to keep the mind fixed on one subject for very long, and though all must learn self-control, too much concentration should not be expected from young children. To children of all ages comes a time when sitting still and listening becomes positive misery. Nature rebels.

Very often an insufficient amount of fresh air in the class-room adds to the trouble—for how can a brain do good work when it is starved for want of oxygen?

The remedy is simple but almost infallible.

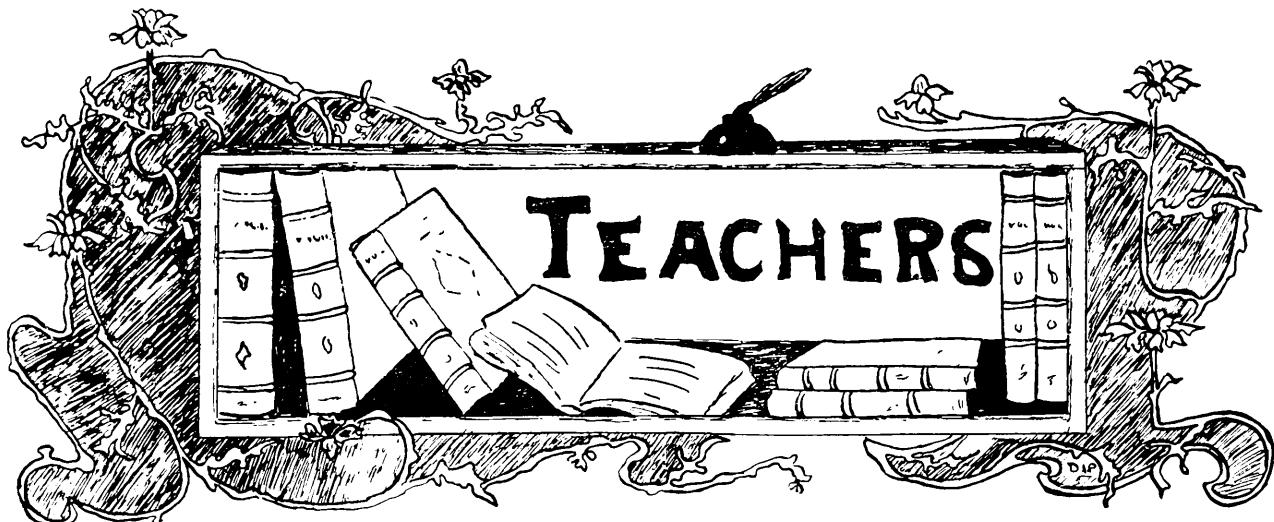
Throw open the windows, or if that is impossible, open the door and ventilators wide, so as to have a good current of air through the room. Make the children sit up in their desks, placing their hands over their lower ribs. Then tell them to take in deep breaths of the fresh air. They should close the

mouth, breathing in, and feel the ribs pressing out against their hands. Make them interested in the exercise and they will do it better. Tell them that breathing that way they use the whole of the lungs, not only the upper part; also that air entering through the nose is warmer and purer than through the mouth. This exercise repeated eight times would at most take two minutes, and the children would work with renewed vigour as the result. If time permits the children should stand up to breathe, as it makes more of a change.

If five minutes can be spared I suggest the following exercises, which require very little space.

1. Breathe-in } as described.
" -out }
2. Arms upward bend. (Elbows down, fingers on top of shoulders.)
Arms stretching upwards.
Arms stretching downwards.
3. Mark time. (Bending up the knees, or should dust or heavy boots forbid this, heel raising, heels together, toes apart.)
4. Arms upward raise. Trunk forward and downward bending. (Knees straight, touch ground in front of toes.)
5. Breathe-in } as in 1.
" -out }

DOROTHY RICHMOND.



Instincts and Education.

IT has often been said that man has reason, while animals have instinct. There is, of course, no such absolute distinction. Man has, in fact, more instincts than animals, because "the more perfect, the more complex the organism, the more difficulties beset its harmonious development" —Spencer. The chief difference is that the instincts of the animal find swift and complete expression, while those of man are thwarted, interfered with. He early begins to learn what he can do, what he must not do, to suppress certain feelings, desires, to control himself, "so that the deed will not contradict itself if it is made the universal act of all intelligent beings." Freedom is doing, or thinking, that which does not affect or interest anybody else, but personal freedom is bound by social laws, the making of which resulted from years of experiences and their effects on mankind.

Man possesses the power, to an enormous extent, of profiting by past experience, and education is possible because of his ability to profit by ex-

perience. New experiences leave new impressions, because mental development always corresponds to the stimulation of new surroundings. This fact justifies education, and makes it possible, —children respond readily to stimuli. Their minds, in the most plastic stage, are as wax to receive impressions and as marble to retain them.

But the human being, with his complete instincts because of his complex mind and its workings, tends to constantly change his ideas, his actions. Instincts tend to be changed, modified, by experience and education. These instincts are of the same origin as reflexes, —it is perhaps impossible to draw a line between the two. But there is this difference: instincts appear to involve consciousness, whereas reflex actions are void of guidance. Hence instincts are more affected by education and its influences; they are more susceptible to modification through experience, and all experience is education. If the instinctive action is both successful and pleasing in result, it tends to become habitual. It is hard to tell the difference at times between the naturally instinct-

ive and the merely habitual. But the natural instinct may be a bad one, and herein lies one aim of education,—to teach the individual to know himself, to select, to suppress or to encourage his instincts to his advantage and to that of the race. Self-control is one of the greatest factors in character-building. One must master one's self before the attempted mastery of others. One cannot teach unless one learns: "Mastery for Service."

Self-reverence, self-knowledge,
self-control,
These three alone lead life to
sovereign power."

But the child is born with his instincts potential, his powers latent. While awaiting the development of consciousness and reason necessary to instincts, Nature has previously endowed him, from the very first, with certain reflex actions necessary to his welfare. In this respect the human organism is exactly like that of the animal,—the initiative instincts, reflexes, are hereditary. When first touching ground, the wee chick, just out of his shell, scratches as naturally (and gets the "early worm" as a reward, maybe) as if he had been scratching a living for years; when the young child would have nourishment, he receives it in the time-honoured way of all the babes before him, and automatically stops when he has had enough, too. These are all reflex actions, at the same time hereditary instincts. All life-sustaining processes are reflex movements. Ordinarily we are not aware of many of these functions going on in our bodies. It is only when some one or other organ is out of order that we become aware of its function. Thus called to our consciousness, our education tells us, from past experience, what to do to force the

function to become reflex again. Reflex actions, then, are those muscular movements which occur in immediate response to sensory stimulation, without the interposition of consciousness. Education tends to make these reflex actions matters of habit, that we may save time, effort, and attention,—conserve energy and thought.

Certain instincts are attributed to certain races; they are more developed, more in evidence than in others. Racial instincts are characteristic and generally strong, hence hard to overcome. But of the natural instincts of all healthy, normal children those common to all are play, imitativeness, constructiveness, imagination, acquisitiveness. The instinct to play is natural to every child. He has life and energy and he wants to use his muscles and limbs. The importance of play, especially of supervised play, is more and more strongly forcing itself upon the attention of educators, and they are seeing the close relationship between play and work. [Establishment of twelve new playgrounds under proper supervision in Montreal during the summer of 1914; opening of a model "City," with mayor and aldermen chosen from the boys using the largest of the grounds, Fletcher's Field,—teaching of civics, and other subjects under the guise of play] Children learn better, and more permanently, when they are not directly conscious of the process of learning. Imitativeness forms a large part of the educational process of young children, as does constructiveness of those somewhat older. A good imagination is a wonderful, useful asset and should not be scorned when the youthful owner sometimes over-works it and, to our minds, exaggerates. Individuality must never be suppressed,—there are few enough who possess any distinctive-

ness. Therefore, cultivate the child's very natural instincts, possibly subordinating them at times, but never suppressing them, for the suppression of an instinct kills it.

"Just as muscular exercise causes an increased growth of muscular fibre, so regulated mental exercise must develop and strengthen the tissue of the brain."—Snodgrass. All teaching is the presentation of organized material; it is "the art of adapting new generations to those conditions of life which are

the most intensive and fruitful for the individual and for the species." This process of adaptation to environment requires long and careful preparation, and it is because of this that the race calls forth the need of education, for if we were born with our powers complete, our habits and instincts well under control, not needing any further development, education would not be needed to so do.

J. V. PRATHER, T., '15.



SHE GREW IT HERSELF.

This little orphan girl in Kent Co., Ontario, grew this corn herself in the corn growing competitions held in 1913.

A Thursday Experience.



HE women's residence, Macdonald College, was the scene of great excitement, the corridors rang with many different sounds, doors opened and closed, windows went up with a bang, while everywhere over the building was heard the sound of hurrying feet.

Why such excitement in the women's residence? What has happened? Should you have asked these questions you would have, without doubt, received the reply, "Why, our section is going into Montreal to-day, to spend the day either in practice teaching or in observing lessons taught."

Breakfast at last is over, and we have set out in groups on our way to the station. The morning is truly beautiful, birds are singing in the branches overhead and the whole earth seems full of life and beauty. But what does it matter to us? We have no time to stop and admire the beauties of Nature; it matters not which of her many changing scenes she pleases to put before our gaze. We must hurry to the station which lies some seven minutes' walk from the college. A little later another scene is presented to our gaze, our companions are climbing into the coach reserved for our use, while we, of course, quickly join the hurrying throng and are soon seated safely within.

Now, we have time to look around us, and soon we observe here and there throughout the coach a girl tightly hugging a light brown paper parcel, and we cannot keep from wondering, "what can be within?" The last year girls know well what these parcels contain, for we soon observe that the bearers

of them are closely guarded, until lunch time at least. The last station is finally passed and Montreal is neared. There is a scene enacted in the train, suit-cases, handbags and books are gathered together from every corner of that coach, and in a very few moments we are out of the train and hurrying through Windsor Street Station.

Many and varied are the experiences of each little group of student teachers. All of these we cannot attempt to follow, but we will try to keep in touch with a small fraction of this section throughout the day.

We at last arrive at our school, which is by no means central. On entering, we are shown to a large "Teachers' Waiting Room," and after waiting there a few minutes we are introduced to the principal, who receives us kindly and conducts us to our separate class-rooms, where we will spend the morning session. It would be impossible to describe the many and varied sensations experienced by the student teacher, should this be her first experience in the mystic art of teaching. She is filled with dread until her hour of doom is at hand, but when once this dreaded lesson is started, all fear disappears and she becomes so engrossed with her pupils, those living, active, little beings that she has forgotten all else. Suddenly little Joseph, third row, last seat, calmly asks her, "why he can not find coal in his yard at home." He tells her that all Montreal was once a forest and surely some of the leaves, wood and bark of the trees sank down into the ground, and *surely* it has been there long enough to become coal. "Please, why is it?" The poor teacher looks appealingly around for help only

to find that she must rely upon herself, as there is no rescuer near. So she proceeds to clear away little Joseph's difficulty, only to find that Sammy has found an even more intricate puzzle than the first.

Remember, she has only twenty minutes in which to teach her lesson. She answers Sammy only to find that Jane or Sally would like to know something else. This instructive lesson at last comes to an end, and the student teacher sighs from pure relief, but there is no rest for her, not just at present anyway. Poor student teacher! There are other lessons to be taught and she might as well teach them. Thus the morning passes; it has not been as tiresome as she expected it to be, and has already found a warm place in the hearts of her tiny pupils. At last, however, school is dismissed until the afternoon session and, oh! how the student teachers welcome this period, as away they hurry to relate some of their experiences to each other over their sandwiches and tea. Our group is soon enlarged as the teachers of the school join us. How fast that hour seems to pass in relating and in listening to school experiences, some of which are very humorous. The hands of the big clock move swiftly and in what seems to us a very short space of time the gong sounds. This is a signal that the afternoon session is beginning.

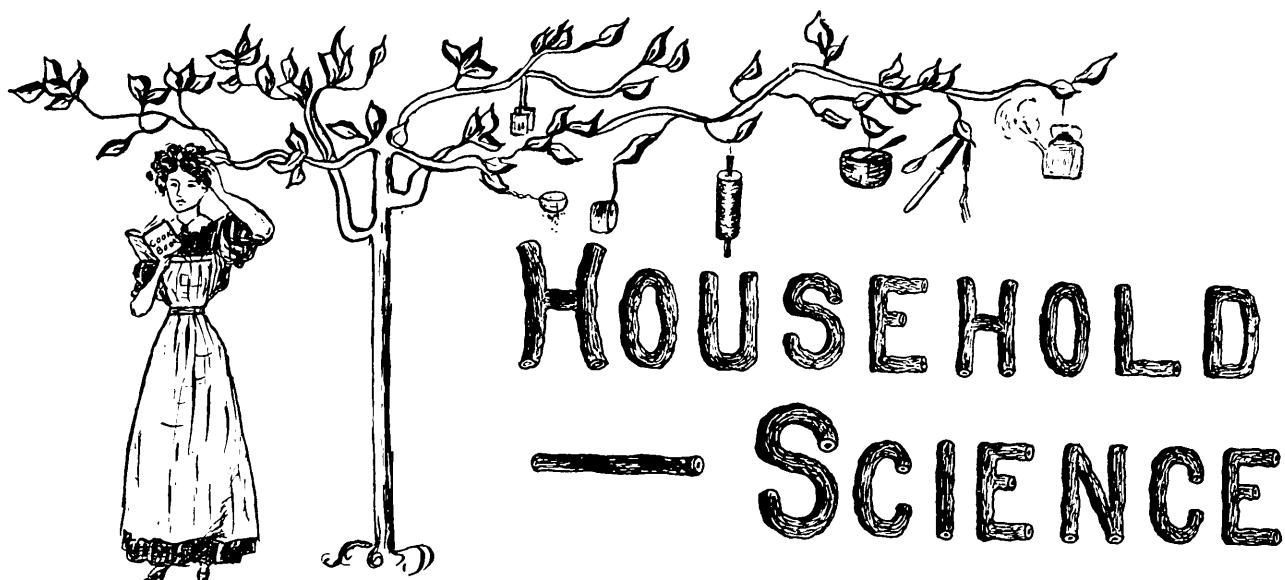
What a difference in our feelings from the early morning. One feels as if the class before her is a sacred trust which she must take good care of. Lesson after lesson is taught, some by the student teacher, others in which she

only assists, until when she is at last ready to take full charge of the pupils for the lesson previously assigned to her, she does not feel nervous, for she is so deeply interested in her charges. At the closing hour she hastens out to join her fellow-students as they return from their class-rooms, and in a very short space of time she finds herself on the street with her companions, a whole hour before them to use at their pleasure.

Time passes on quickly until 5.15 arrives and the girls must board the train, as time and trains wait for no man, nor woman either, no, not even a student teacher. Once seated in the train the time for relaxation has arrived for all who are not too weary, and why should it not be a time for pleasure? Macdonald College and a nice warm supper await us in the distance. We have the college songs to sing, and these soon ring through the train softly but merrily, followed by merry chatter and laughter. The magic words are soon heard, "Ste. Anne's next," and how we welcome them. Each girl jumps to her feet, ready to alight the moment the train reaches the station. Out of the train, across the tracks, down those steps and out upon the street we go, until finally the college is reached and soon we are seated in the dining hall. There is no need to go with us farther, it is enough to say that we all enjoyed our well earned supper, after which each girl goes to her own room, feeling that there is more pleasure than hardship in a day's experience in Montreal.

V. GRIMES, T., '15.





The History of the Manufacture of Clothing.

Some Primitive Conditions.



T the present day when we wish to buy clothing, we have only to step into a shop and, in the twinkling of an eye, we may say, have laid before us by the obliging salesman any number of materials of various qualities, colours, and designs, from which, on account of their attractiveness, we often find difficulty in making a choice. Or, we may go a step further, and instead of buying the material for the garment we may buy that garment all ready for us to wear, and complete in the smallest detail.

Were things always so? Do we ever stop to consider the ages of development that have been passed through before this state was reached? The ingenuity which has evolved the spool of thread we may buy so cheap? The history, invention, yes, and the art that lies back of that piece of cloth with the beautiful design and colour? If we are to buy our clothing intelligently—know

how to judge the quality and have an appreciation of the value of the cloth—we must know a little about the history of the development of cloth and clothing. And, further, we must remember that, next to agriculture, which is the important industry of the world, the textile industry comes second, and that from the modern standpoint of progress, the state of civilization of a people can be largely judged from the stage through which their textile industry is passing.

To understand the growth of this industry, we shall have to stop for a minute and go back to the age of primitive man—see how the work originated and advanced from one stage to another. Let us bear in mind, however, that primitive man still exists on certain parts of the earth, and that all tribes and nations did not pass through the same stage at the same time.

With the most primitive type of man the greatest object was to secure food, which he did by hunting the wild ani-

mans in the country around him, and fishing in lakes and streams. He did not work single-handed in this—woman went along with him and hunted and fished as well. The implements—if we may so term them—used for this work would be of the simplest kind. With the discovery of fire, a new order of things developed. Fire, which probably originated with volcanic eruption, lightning striking some object, and later created by man through friction, had to be very carefully guarded and tended, as it was a serious thing if it went out, for means of securing a new fire was far from being as easy as at the present time. Hitherto, man had had no settled place of abode, but spent the night where fatigue and darkness overtook him. Now, he returned to where his fire was, and we find “home” originating. Division of labour arose. Women stayed and tended the fire, while man went out and secured food.

The home or shelter was very crude at first—oftentimes a cave. To make a cover for the ground leaves or rushes were laid down, and to make them firmer these rushes were interlaced. If there was not a cave, a cover for protection from the elements was made by interlacing twigs and boughs together. With these forms of interlacing we have the beginning of weaving, which was known as “wattling.” So we see that the art of braiding and interlacing stems of plants was one of the earliest practised, and is the basis of modern weaving.

Another result of fire was the cooking of food, and as it could be preserved in this way, it had to be secured less often and man had more time and energy for other things—tools were improved and social life developed. The utensils first used for cooking were secured from nature—skulls of animals, shells, and so on. Later, vessels made of skins were used. The basket, the making of which

involves braiding, weaving, or sewing, had its place among these. Some one discovered that certain grasses or barks woven together made a receptacle which held water. These were filled with water and hot stones dropped in, and thus the water was heated. Later, clay was modelled around baskets, making a container which would withstand fire, and from this pottery was evolved.

Now, what about the clothing? Man chooses his clothing for two purposes—protection and decoration. To serve his purpose he took the things at hand, and consequently we find the dress of different peoples varying greatly as they depended on the particular kind of raw material which their district produced. The skins of animals, both with and without the fur, were used largely, and were the beginning of our “leather goods.” Grasses were braided and woven together for garments. The seed hairs of some plants lent a fibre, which, when twisted or “spun,” could be woven into cloth, and the same is true of the covering of certain animals—for example, wool, and the hair of other animals, which is particularly adaptable for such use. With the twisting or spinning of these fibres together a smoother continuous thread could be made and consequently a smoother, finer cloth. The way of weaving these threads together passed gradually from one stage to another. Originally the first set of fibres was laid on the ground, and into these, by the fingers, were woven the other strips; not one continuous thread, but strips which reached across the width of the article, but by the art of spinning these were turned into one strand. With the first set of fibres loose like this, it would be difficult to weave in the cross fibres, and the idea of attaching these to two parallel rods—crude boughs, probably—gave rise to the first loom, which is the basis of our modern machine-driven one,

with all its harness and attachments. The cloth made on these simple looms was the size of the loom and was used in that state for a garment. We see this exemplified in the blankets of the North American Indians, who also used skin so much for their clothing.

Along with the making of cloth developed the art of dyeing. From various plants "dyes" were secured, the durability and beauty of which are too well known to need expanding upon here. Beautiful designs were also worked out, ideas were taken from nature and designs symbolic of religious beliefs also were used.

Besides the decoration secured from the colour and design on his clothing, man used other things for ornament—trophies of hunt and war were used, painting and tattooing were other forms of decoration, and all attracted attention. Just how far we, in our desire to attract attention through dress, have advanced from primitive man, we shall leave to the individual to decide!

As time went by and the invention of one was added to that of another, the art of spinning was improved; looms were improved, and in place of the loom on which could only be made a piece of cloth of a certain size, we find the one on which yards of cloth could be made. As a result, garments were made out of cloth which was fashioned and fastened together by means of sewing. And so the designing, dyeing, weaving and fashioning of cloth for garments went on, and right up to the time of our grandmothers the whirr of the spinning-wheel and click of the loom was heard in our homes, and every girl learned not only to spin and weave, but to dye as well, and so was an excellent judge of textiles. For was she not the maker of them?

However, the inventive genius is always busy. Water-power and then steam replaced the hand-power machine,

and spinning and its relative arts were taken from the home, and the mill and factory grew up, and the age of specialization was established. For a time the cloth was bought and oftentimes made up at home into garments, but the factory and various establishments for making "ready-to-wear" garments are now common in our lands. So the road from the time when woman went out and gathered some grass or the seed of some plant, prepared it for spinning, made her dye and wove the cloth as fine, be it remembered, as the present day machine-made piece—to the present day when she may buy anything she may need for her family ready to wear, is a long one and marked on the way by devices, often simple, which meant one step more in the advance of the Textile Industry.

From being the world's great producer, woman has become its great consumer. She cannot be as familiar with the making of cloth as her sister of earlier times, owing to conditions existing, but that she may know how to buy her cloth intelligently, the Schools of Home Economics are giving courses in Textiles, and the children in the primary schools are learning about the fibres used for cloth and the simple principles of spinning and weaving, thus teaching them to become better consumers.

And, although we could not in this present day eliminate our machine-made things and go back to the handicraft age, let us not do away with our "Hand Crafts" altogether. In addition to the joy and also the benefit secured from seeing something take form and grow under the hands, the value secured from training the muscles of the hands, making them deft and "cunning," as well as educating the eye to the appreciation of design and colour, cannot be overestimated.

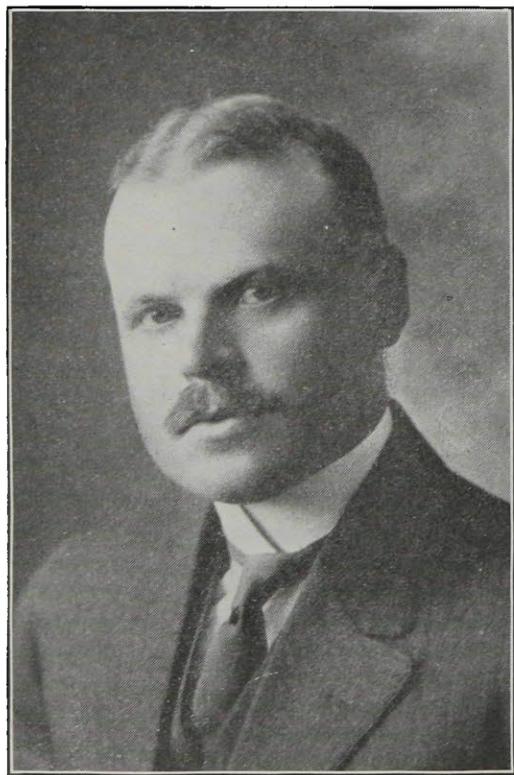
A. E. HILL.

Faculty Items.



HE chair of Cereal Husbandry has been filled by the appointment of James Murray, B.S.A. Professor

Murray is a native of Simcoe County, Ontario. He was educated for the teaching profession and afterwards took a course in the Ontario Agricultural College. Immediately after his graduation, in 1902, he was appointed head of the Seed Laboratory



PROFESSOR J. MURRAY.

in the Seed Commissioner's Division at Ottawa. In 1904 he was sent by the Seed Commissioner to take charge of the work of the Seed Division in the four western provinces. After two years he resigned to enter the service of the Saskatchewan Department of Agriculture as Superintendent of Fairs and Institutes. From 1906 to 1911 he was Superintendent of the Dominion Experimental Farm at Brandon, which position

he resigned to take charge of a 64,000 acre tract of land at Suffield, Alberta, for the Canadian Wheat Lands, Limited, an English company.

In all of these positions Mr. Murray has exhibited exceptional energy and initiative. It was his seed-testing work at Ottawa, the first undertaken in Canada, that furnished the basis for the Seed Control Act. As representative of the Seed Division in the west, he organized seed fairs, schools of instruction in grain judging, smut control and weed eradication, and standing crop competitions. During his connection with the Saskatchewan Department and with the Dominion Experimental Farms he conducted or assisted in winter courses for farmers' sons. In the large scale farming project of the English company he brought 25,000 acres of land under cultivation within three years. This "bonanza" farm is eventually to be irrigated, but up to the present it has been necessary to operate it upon the dry-farming basis and it has taxed the ingenuity of the manager to get any sort of returns with an average annual precipitation of only ten inches. In alfalfa seed growing Mr. Murray believes he has found a line of farming suitable to a district of this arid character.

It will readily be gathered from the above that Mr. Murray's experience has been an exceptionally broad and varied one and that Macdonald College is gaining in him a man capable of great service.

The first lecture of the Bachelors' Club's series for the season was given by Professor Laird on Monday evening, November 2nd, in the large lecture room, of the Biology Building. The

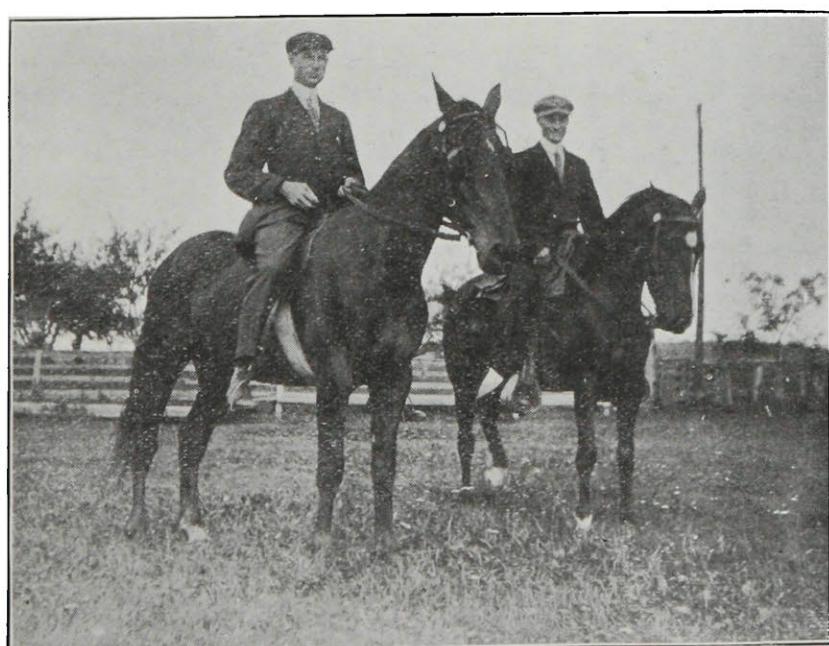
topic, "The Brain and Education," was copiously illustrated by means of lantern diagrams of the brain and the nervous system. Much interest in the subject was displayed on the part of the audience as well as on that of the enthusiastic lecturer. After the lecture the audience adjourned to the Bachelors' quarters for social converse.

The second meeting of the Macdonald College Club took the form of a lecture on "Military Organization," by Principal Harrison. The meeting was held in the large lecture room of the Biology Building and was well attended. The blackboard, the lantern and the mimeograph were all used in the illustration of the lecture, and specimens of the rifles and bayonets used in some of the great armies of the world were passed about for examination. The manner in which military operations are conducted was clearly brought out by means of two specimen orders for a day's fighting on the west end of the Island of Montreal—one representing a halt for

recuperation and preparation to repel an attack, and the other a retreat from the Island. The appreciation of the Club for the interesting address and for the trouble Dr. Harrison had taken in preparing so much illustrative material was expressed by Prof. Laird and Mr. Wright in moving and seconding a vote of thanks.

The second lecture of the Bachelor's Club's series was given by Mr. Jull on November 23rd, the subject being "The Inheritance of Fecundity in Domestic Fowl." Writing before the event, the Editor can only say that the subject was handled in Mr. Jull's usual able manner.

Over sixty visitors were present in the Teachers' Residence on the evening of the first reception of the season, November 18th. The numbers attending these receptions are sufficient evidence of the esteem in which the hospitality of the Residence is held in the community.



Two of our District Representatives, Messrs. Raymond and Durling, starting out on their rounds.

Class Presidents—School of Agriculture.



E. M. RICKER holds the position of President of Class '15 for the third time. Good executive ability and well-earned popularity have brought this about. He is also President of the Students' Council, a position which he efficiently fills.

□ □ □



G. C. HAY has the honour of being President of Class '16. George favoured Lachute, Que., by choosing it as his birthplace. Educated at Lachute Academy, he finally chose Macdonald as the best place to make himself useful, and this he has succeeded in doing in no mean way, for he is a most willing and capable worker.

□ □ □

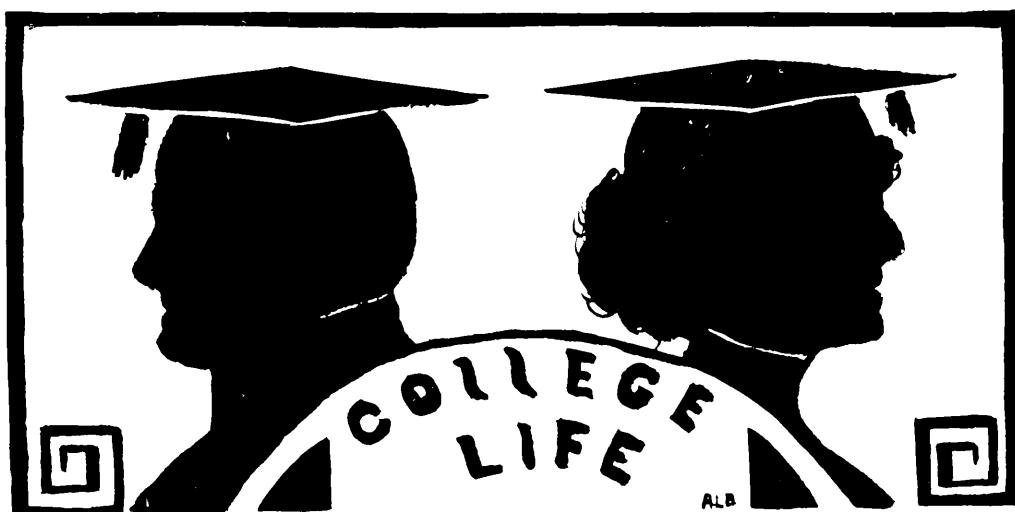


A. R. MILNE holds the office of President in Class '17. The Sophomores certainly made a wise choice when they chose him as President. Milne was born at Pointe Claire, Que., and was educated at Montreal Model School and Mount Royal Business College. He believes in "Votes for Women," wears No. 7 shoes, and stands in well with the girls.

□ □ □



H. W. BRIGHTON, President of Class '18, is a globe-trotter of no mean ability. Born at Denver, he reached Ottawa in 1906, whence he went to Edmonton, where he finished his education in the Victoria High School. Brighton has made a good impression here and we hope he will pull the Freshmen through. Brighton, on being interviewed, stated that he kept his matrimonial views in cold storage, drank 98.06 cc. of water per meal and liked Macdonald better everyday.



THE GIRLS' MASQUERADE DANCE.

Great was the excitement which pervaded the corridors of the Women's Residence on the thirtieth of October. Girls went rushing through the corridors in wild excitement. The air was filled with such shouts as "What are you going as?" "Going to rouge?" "What dances can you give me?" and hundreds of other expressions of a similar nature. Gradually the hubbub died down as the girls went to their rooms to prepare for the dance. But as the hands of the clock pointed to eight the noise started again, a hundred times worse than before.

The gymnasium made a splendid ballroom. The decorations were most suitable for the occasion. The big electric lights shone through glaring faces, while hideous pumpkin faces grinned at us from all corners of the room. The cozy chairs from the reception room looked very inviting, piled high with cushions, and before the evening was over we were all glad they were there.

We were received at the door of the Gym. by a very little girl and a Mexican chief, then we passed on and mingled with the crowd. And what a crowd it was! In one corner was an Indian chief discoursing earnestly with a very black Aunt Jemima. Farther on a Mar-

tha Washington was heard vehemently declaring that her husband George simply couldn't tell a lie. Little Buster Browns went racing across the floor, trailing their woolly dogs after them. Then the band struck up and the Grand March began. Round and round the Gym. we marched to the tune of "Tipperary." After several dances we lined up before the judges. They must have had a very difficult task in judging such a variety of splendid costumes. Miss Thomson was awarded first prize for the Faculty; Miss Macintosh for the gentlemen, and Miss Findlay the ladies. Miss Thomson's costume was that of a Viking; Miss Macintosh was dressed as a scarecrow, and a fine one she made; Miss Findlay's costume was most appropriate as she was dressed as a witch.

About half-past ten supper was served, and it may be just as well to mention that the boys did all the serving. After supper heads began to bob and the floor was much clearer than at first. Each dance saw a fresh departure, but after the last dance we were able to muster enough dancers to give the college yells. Then we joined hands and a hundred lusty voices joined in singing the college songs and "Auld Lang Syne." Some one proposed a hearty cheer for our soldiers and sailors, and that led up to

"It's a Long Way to Tipperary." Then followed the National Anthem, and after saying good-night to Miss McGill we returned home.

Someone was heard to remark that they really didn't see how girls could find any fun in dancing with each other till one o'clock. Well, we see why, don't we, girls, and we aren't easily pleased, either.

than men." Arguments in negation of this contention were presented by Messrs. Wilfrid Sadler and J. Egbert McOuat on behalf of the class of 1915.

The debate was marked by earnestness and dignity and well sustained the traditions of the College for good argumentative oratory. The negative had obviously the advantage in the matter of appealing to the sympathies of the



Students' Council.

(Photo by Stroud).

THE JUNIOR-SENIOR DEBATE.

The first interclass debate of the session was held on Monday evening, November 23rd, in the Assembly Hall, Miss Marjorie Hyslop, the vice-president of the Society, occupying the chair. Messrs. L. W. F. Crothers and Geo. C. Hay, representing the Junior Class, contended "That Canada's contribution to the British Empire in the present war should consist of material rather

audience and this advantage was used freely but courteously.

The affirmative maintained (1) that Britain is in more need of supplies than of men; (2) that Canada is in better position to supply materials than men, her men being without the necessary training; (3) that the final outcome of the war will depend upon economic considerations; (4) that a contribution of materials may be instrumental in pre-

venting an epidemic; (5) that Canada needs her men to repel possible attacks upon her own borders; (6) that a contribution of materials would benefit Canadian manufacturers.

The negative contended (1) that Canada is not producing a surplus of any material except wheat; (2) that Britain is able to buy materials; (3) that the military authorities are calling for men not materials; (4) that the need is immediate, and an increase in production of materials cannot be realized before next harvest; (5) that increased production can only be accomplished by the use of British capital; (6) that the real danger to the Empire is in Flanders, not on the borders of Canada.

In the opinion of the judges, Dr. MacFarlane, Professor Laird and Professor Barton, the affirmative did not make the most of the powerful arguments they presented, nor did they succeed in exposing the errors in reasoning committed by their opponents. The decision in favor of the negative was based on superiority in both matter and delivery, as is shown by the figures submitted:

	Matter 60 possible	Delivery 40 possible	Total
Affirmative. . .	40	23	63
Negative. . .	45 $\frac{1}{2}$	28	73 $\frac{1}{2}$

The musical programme was of high merit, comprising an organ solo by Mr. Stanton, a violoncello solo by Mr. R. Schafheitlin, a violin solo by Miss Portray and a vocal solo by Miss Thom.

Y.M.C.A. NOTES.

The Sunday morning meetings, held every Sunday in the Men's Gym., at 9.30 a.m., have been very well attended so far this year, every Sunday the number of men turning out exceeding

that of the previous Sunday, until the number has reached about one hundred. This fact shows that the Association is giving the men what they want and what they should have, and the men in turn show their appreciation by turning out in increasing numbers. If this continues we will soon have all the men in residence at these meetings, a result much to be desired.

We have indeed been fortunate in the quality of the speakers who have so far addressed the meetings, their speeches being much enjoyed by all. The year was given a good send-off by Dr. Lynde, who, in addressing the first meeting, gave a welcome to incoming students and some good advice to all. The following meeting was addressed by the Rev. Mr. McLeod, of the Union Church, who, as usual, held the interest of the boys throughout the meeting. These have been in turn followed by Mr. Clarke, General Secretary of the Students' Y.M.C.A.'s in Canada, who spoke on "Organization"; Dr. G. A. Smith, Physical Director of the Central Y.M.C.A., Montreal, who dealt with the place of the young man in the nations of to-day, and how he should conduct himself so that the following generations might be strong and virile, well able to take their place in the forefront of the nations; and Dr. Fred Kelly, of Montreal, who chose as his subject, "What a Young Man Is."

ELECTION OF HONORARY OFFICERS.

The following honorary officers were elected at the Sunday morning meeting, November 22nd.

Hon. President.—Dr. C. J. Lynde.

Advisory Committee.—Mr. R. Summerby; Mr. L. C. Raymond.

The Honorary President also holds a position on the Advisory Committee.

AMENDMENT TO CONSTITUTION.

An amendment to the Constitution was also voted on and unanimously carried at the above meeting. This amendment is to the effect that the chairman of any committee doing work in connection with the Y.M.C.A., and who is not a member of the executive, shall be made a member. Under this amendment, Mr. Williamson, chairman of the Bible Study Committee, becomes a member of the Y.M.C.A. executive.

BIBLE STUDY CLASS.

Mainly through the efforts of Mr. A. C. Clarke, General Secretary of the Students' Y.M.C.A. in Canada, a Bible Study Class has been formed in the College. There are at present four groups, with six or seven men in each. Each group has a leader and assistant leader, and these men meet together once a week as a normal class and go over the topic for the week with the Rev. Mr. McLeod, who has been chosen as normal teacher. The object of this study is to get those who wish to join into closer touch with the Bible and its application to every-day life, and also to learn how to study it. The subject chosen for study this year is "The Manhood of Christ." Study has begun, and all are looking forward to a pleasant and profitable winter's work.

The following are the leaders of the four groups and their seconders:

<i>Leader.</i>	<i>Seconder.</i>
H. Williamson, Chairman.	E. Grove-White.
C. E. Boulden.	R. Schafheitlin.
G. W. Cochrane.	C. B. Gooderham.
H. C. Bailey.	A. R. Milne.

MACDONALD COLLEGE LITERARY
AND DEBATING SOCIETY.

1914-15.

Hon. President, Principal Dr. Harrison.
Hon. Vice-President, Miss McGill.

OFFICERS.

President, Wilfrid Sadler.
1st Vice-President, Miss M. Hyslop.
2nd Vice-President, Miss C. E. Robinson.
Secretary-Treas., R. C. M. Fiske.

MEMBERS OF EXECUTIVE.

President Teachers' Literary Society,
Miss C. E. Harwood.
President Section "A" Literary Society,
Miss R. Echenberg.
President Section "B" Literary Society,
Miss G. H. Maine.
President Section "C" Literary Society,
Miss M. Travers.
President Elementary Teachers' Literary Society,
Miss De Lisle.
President Home Economics Club,
Miss M. Cowling.
Representative Junior Science,
Miss A. Reid.
President Class '18 Literary Society,
H. Carlton.
President Class '17 Literary Society,
T. Rankin.
President Class '16 Literary Society,
L. W. Crothers.
President Class '15 Literary Society,
J. H. McCormick.

The aims and objects of this Society are the inculcating and developing of the aesthetic side of our nature.

In an Agricultural College the work to which we are devoting our lives and the best energies with which a bountiful Nature has endowed us, entails of necessity a somewhat close application to the scientific and the practical.

There is all the more reason, therefore, for our taking such opportunities as offer themselves for development along the broad lines of what we may be permitted to term aestheticism.

By devoting a certain amount of time and thought to genial reading, to music, to public speaking, and to debating, we sooner or later find ourselves appreciating the wider college life.

Every student in the whole College is a member of the Society, and we appeal for an interest in all the proceedings—an interest both specific and general.

The President occupied the chair, and the Hall was well filled with those who wished to show their interest in the work of the Society and hear the programme which consisted chiefly of the annual elocutionary contest, both for the ladies and men.

The College Orchestra first favoured the audience with several pleasing selections, following which the President, in his introductory remarks, briefly outlined the objects of the Society and appealed to the members for their hearty support.



Some of the "Girls."

We hope that all who have tendencies and ambitions towards accomplishment in the arts of music, vocal or instrumental, public speaking, debating, and so on, will take advantage of the College Literary and Debating Society, and through its channel express themselves and give others an opportunity of deriving benefit from such expressions.

The opening meeting of the above Society was held in the Assembly Hall on Monday evening, November 2nd.

The ladies' section was first contested. Those taking part were: Miss M. MacNaughton, Miss Ethel Montle, Miss T. B. Latimer, Miss M. D. Harris and Miss M. Travers.

There was keen competition and the audience showed their interest by their enthusiastic applause.

A delightful variation in the programme was a violin solo by Miss Reynolds.

In the men's contest those taking part

were: J. H. McCormick, R. Schafheitlin, E. C. Hatch, A. R. Jones, T. Hetherington

Each speaker had chosen a subject having some bearing on the present war.

While the judges, Miss Fisher, Miss Richmond and Dr. MacFarlane, were considering their decision, R. Schafheitlin favoured those present with a 'cello solo. The judges' decision was then announced by Miss Fisher, and Miss McGill presented the prizes, as follows: in the ladies' contest, 1st, Miss M. MacNaughton; 2nd, Miss Ethel Montle; 3rd, Miss T. B. Latimer; and in the men's contest, 1st, T. Hetherington; 2nd, J. H. McCormick; 3rd, E. C. Hatch.

The meeting closed with the singing of the National Anthem.

For an account of the next meeting of the Society, see article entitled Junior-Senior Debate.

THE MAGAZINE BOARD'S SOCIAL EVENING.

On Friday evening, the 13th Nov., the members of the MAGAZINE Board met to look over the first copies of the new MAGAZINE.

J. E. McQuat, the editor-in-chief, gave a few appropriate remarks on the reason of our being assembled: Firstly, to discuss the work for the next MAGAZINE, and, secondly, to have a social evening and a general good time.

One of the side issues of the evening was a competition for guessing the number of pages in the MAGAZINE. H. C. Bailey was the lucky winner, guessing the exact number.

The MAGAZINES were then given out and criticised. Needless to say, the department most eagerly turned up and read first was the "Joke Column," the more general sections receiving attention later. A noticeable point in the new MAGAZINE is the new cover. This cover was designed by Miss W. Thomp-

son, the drawing instructor for the College. Everybody remarked on the vast improvement of this cover over the one on the old magazine.

Autographs were exchanged, and then refreshments (or "Eats," as J. E. expressed it) were served. After all had thoroughly enjoyed this part of the programme, Miss Kilburn rendered several piano solos, and played the accompaniment for College songs and popular airs. "It's a Long Way to Tipperary," played several times over, fully satisfied "Weary Willie." College yells and "God Save the King" were given, and then "Good-night, ladies," finished a very enjoyable evening for all concerned.

CLASS '18 LITERARY SOCIETY.

The Executive of the above Society consists of the following men:—

Hon. President—Prof. Barton.
President—Harry Carleton.
Vice-President—G. D. Matthews.
Sec.-Treas.—“Bob” Reid.
Committeemen—{ L. F. Tilden.
{ P. Ashby.

The subject of the first debate, which was held on Wednesday, November 11th, was, "Should M.A.C. enforce student labor upon men coming right off the farm?" The debate was a successful one and of great interest to Class '18, as they were intimately acquainted with student labor by that time. The sides were as follows:—

AFFIRMATIVE.

Leader—G. D. Matthews.
Seconder—C. Loomis.
Thirder—C. G. Standish.

NEGATIVE.

Leader—P. Ashby.
Seconder—J. A. Howard.
Thirder—R. H. Todd.

Mr. G. B. Boyce, '16, was the honorary critic, and in performing the duties of such a difficult position not only satisfied both sides, but at the same time gave much good advice and many helpful hints which he had acquired from his experience in debating. The decision was awarded to the Affirmative, not from an oratorical point of view, but principally because they furnished more outside data which proved to be of great importance. The Freshmen year has no scarcity of debaters, and promises to make a mark for itself when it is heard from in the Inter-Class debates.

H. C., '18.

SECTION "C" LITERARY SOCIETY.

A meeting of the Literary Society of Section "C" was held on the evening of Wednesday, November 27th, Mr. Brunt ably presiding in the absence of Miss Travers. Miss Robins, the honorary president, gave a most interesting and instructive talk, "The Legal Status of Women in the Province of Quebec." The chairman then called upon Mr. Dashwood, who entertained the meeting with a well-told Yorkshire folk story, which caused great amusement. Then followed an interesting reading by Miss Prather from Thomas Moore's poem, which was doubly interesting to the hearers because of the poet's close connection with our Ste. Anne and the near vicinity. Mr. Brunt thanked the speakers and the meeting then proceeded to the discussion of certain routine matters, among them the decision of a subject for debate at the next meeting, Dec. 16. The subject chosen was that suggested by Miss Robins—Resolved: That the horse is a more useful animal than the cow. Debaters chosen were Miss Prather and Mr. Brunt for the affirmative; Miss Shaw and Mr. Jacobson for the negative.

Miss Robins kindly invited the Society to hold the debate in the Teachers' Residence, an invitation which was very gladly accepted. The meeting then adjourned to further enjoy the delicious fudge provided by the thoughtful honorary president.

THE PATRIOTIC CONCERT.

The Patriotic Concert, held on Friday, Nov. 20th, in aid of the Patriotic Fund, was one of the most successful ever held at Macdonald. The voluntary contribution collected at the door amounted to one hundred and fifty dollars.

The first item was a very interesting address on the war by Dr. Harrison. As time did not allow of a long address, Dr. Harrison only treated the question from the German standpoint. He brought home to us very plainly how, from the year 1864, the speeches of Germany's chancellors and the Kaiser himself had all prepared the German nation for the present war. He further pointed out that although we, as a nation, had looked on those utterances as vapourings, we know now, to our cost, that they were not meant as such. The whole address gave us a very clear idea of the German attitude, and that even in their religion they look upon themselves as the elect of God, and the most intelligent and warlike nation on earth.

During the evening we had some very fine selections from the Macdonald College Orchestra, under the direction of Mr. Stanton, our director of musical education at Macdonald. Mr. Stanton has quite a large orchestra this year, and if we can judge from their excellent performance of Friday night, we may expect great things from them before the end of the College year. The Glee Club, also under Mr. Stanton's leadership, gave us a fine rendering of "O Canada," the audience standing and joining in the chorus.

The various other musical items were a song from Miss Rollins, rendered in her usual masterly style, and a lively violin solo from Miss Reynolds. Mr. Godwin delighted the audience with his recitations from the "French Habitant." Dressed in the garb of the habitant, he made the reading very realistic.

The dances, a very attractive feature of the programme, and very much appreciated by the audience, were quite an innovation at Macdonald. The first given was the Spanish Dance. The

stage, dressed in blue crepe paper dresses with black Napoleon hats and blue flowers ; on the right came Misses Blackader, Ibbotson and Harris, dressed in pink crepe paper of same pattern. They met in centre of stage and walked to the front and separated, forming a triangle with Mr. Hyndman in centre. In the third, Mr. Hyndman, in soldier's dress, gave us a song composed by the students to the tune of Tipperary, the chorus assisting, dressed this time in yellow crepe paper skirts with green



Autumn Short Course.

performers were, first couple, Misses Blackader and Hicks ; second couple, Misses Ibbotson and Leet ; third couple, Misses Harris and Black. Dressed in Spanish costume, green skirts, black velvet jackets, red sashes, and carrying their tambourines, they gave us a very graceful rendering of the dance. In the second, the Mandalay Song and Dance, by Mr. Hyndman and chorus, the first two verses were sung by Mr. Hyndman, the chorus, Misses Hicks, Leet and Black, coming in from left of

capes and black hats. As an encore, Tipperary was given, in which the audience joined. Great credit is due to Mr. Hyndman and his chorus for adding so much to the attractions of the programme.

A few words about the play of the evening, a Military Act entitled "The New Recruit." The first part consisted of a street scene between the Recruiting Agent, Mr. Peterson, and Mr. Russell. In the second, the Recruiting Office gives Mr. Russell full play for

many sly jokes and witty remarks. Mr. Russell certainly gave us a great treat, and from the first till the last of his appearance on the stage, kept the audience in roars of laughter, almost to the verge of hysterics.

Great credit is due to the worthy chairman, Mr. Hyndman, the committee composed of Miss Green, Miss Watham and Mr. Ricker, and to the performers and stage managers, for the very excellent programme brought forward in aid of such a worthy cause, for Macdonald is nothing if not patriotic.

THE GIRLS' DANCE.

For at least a fortnight beforehand anyone could see that something exciting was going to happen. Little electric currents in the shape of the word "Dance" floated through the air. Every night the girls conscientiously practised their dancing in the Gym. Every night (perhaps all night would be better) the boys practised dancing in their Gym. This went on until the twenty-seventh of November. Then those who had idled their time away mourned because they had not practiced oftener.

The gymnasium was lined with benches piled high with cushions. The soft rose shades over the electric lights cast a glow over the whole room. In one corner a moon, large at one time, small at another, cast its light into most unexpected places.

On entering, the guests were received by Miss McGill and Miss Wathen. Everything was buzzing and confusion till the music began. Then what a pretty sight it was to see the couples sliding over the smooth floor!

There were four moonlight waltzes besides the popular one-step and old-fashioned barn-dance.

As I am not a good judge of women's clothing, I shall leave undiscussed the

gowns which the young ladies wore. Any and every hue was present. But what was far more important was the shining happy look on each face. Any one would know that the girls and boys were enjoying themselves.

After the ninth dance refreshments were served, and the company took up their happy dancing once again.

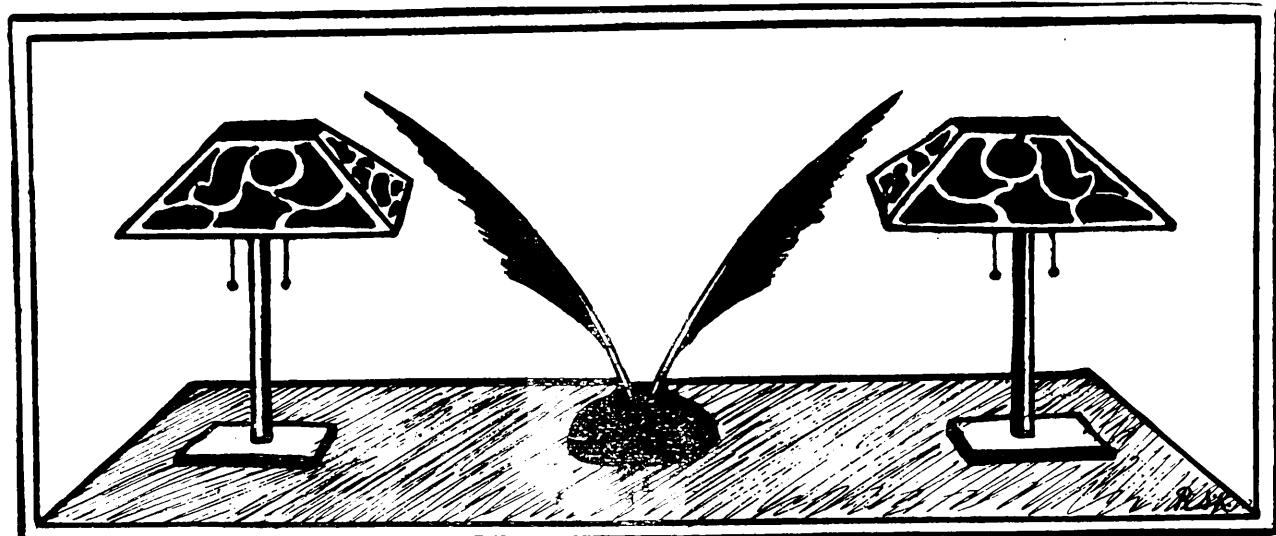
At the end of the evening the pianist played "It's a Long Way to Tipperary," and after saying "Good-night" to Miss McGill and Miss Wathen we returned home tired and happy.

Now, as Newton says, "To every action there is a contrary reaction," and this dance was no exception to the rule. Next morning there was a noticeable decrease in the attendance at breakfast and Sunday morning this decrease was even more marked. Were we lazy? Certainly not. We merely stayed up from breakfast to talk over the dance.

But as the readers of this will probably be more tired after reading this description than after the dance itself, I shall stop. Only before I close please let me say one thing more. I think the dance was a grand success, don't you?

H. H. S. FEED.

The Homemakers and Short Course Girls gave their second Class Feed on Friday night, the 23rd of October. All the class turned out in their usual feed attire promptly on time. There were six dances for which sweet little programmes were given, and then the long-looked for supper! It quite fulfilled all expectations, and our thanks are due to the Committee who arranged everything so well. Supper over, there were some more dances and then the yells and College songs were given, after which we all adjourned.



Under the Desk Lamp.

A TERRIBLE MISTAKE.

HIS little section of our publication was named some time in the past as "Under the Desk Lamp."

Its chief purpose was to be that of enabling students and others to write short letters of comment or criticism, either favourable or otherwise, to the MAGAZINE for publication in these columns.

Its purpose has for the most part failed, and we have pretty nearly arrived at two conclusions. The first is that there must be no "Desk Lamp" to get under so that these articles may be written, and the second is that, providing such a fixture does exist in our midst, that there is nothing in our College activities which is worthy of criticism in these pages.

If the first conclusion be true, we apologize to all who may accidentally peruse these lines. It was awfully thoughtless of us and we merit your criticism. Having given it such a name there certainly should have been provided the apparatus that went with it, so that all might have taken a hand. It should never have been given that

name at all. It should have been called "Under the Stars," or "Under the Canopy of Heaven," and then everybody, who at one time or other is pretty certain to be geographically underneath these indispensable features of our universe, would have had a chance to air their grievances, without having to seek the refuge of the Desk Lamp.

We tend, however, to cling to our second conclusion, for we believe that if there were anything to criticize that someone, who simply had to have an outlet for his outraged feelings, would have thought of this terrible mistake before and have asked us to get a desk lamp under which he might creep and there pour forth the vials of his wrath in impassioned language.

Such a person not having yet arrived, we feel reasonably certain that our second conclusion is a safe one, and that all is well.

We wish, then, to congratulate ourselves and the leaders of the other activities in the College on the high state of perfection to which all our organizations have attained, and we wish to warn all and sundry that any complaints we may hear are only the

illusionary vaporings of a wandering brain, and are not to be taken seriously.

Having shown you all, by taking as our text the misfortunate title of this section, that all is well in our midst, and that the section is absolutely unneeded, we bid our readers (thanks to both of you) a pleasant night's rest.

P.S.—We feel a lot better now—it had to be done.

NOTICES.

At the very outset, let us affirm with all the emphasis with which the humble pen of a mere humble student is blessed that it is our deliberate opinion and settled belief that these particular lines will not be read. We arrive at this conclusion solely as the result of experience ; and surely experience is the best of teachers. We arrive at this conclusion because experience has proven that any collection of words, phrases or sentences arranged underneath the innocent looking heading "Notice" is doomed to everlasting oblivion and is fit subject only for a forgotten and forsaken grave.

In the early days of the College, a far-seeing and presumably wise benefactor adorned certain portions of the walls in our various buildings with pads of cork matting, beautifully tinted with green, and most tastefully framed with four pieces of imperishable wood, so arranged that a continuity of purpose was evident even to the most casual on-looker. In some cases, the artistic effect was appreciably increased by the addition to the matting of cork and frame of wood of a piece of transparent glass.

Our readers are perfectly justified—if they have read thus far—which we doubt—in asking, in the words of the ancient Peterkin, "Now tell us what 'twas all about!"

It's simply this : the adornment of the walls, above described, was the pro-

vision made by a wise benefactor for the reception of those innocent looking Notices already mentioned. And what advantage has been taken of the said provision ?

Officials of the various College societies, in the innocence of their belief in human nature, write, print or type a Notice, and pin it up on one or more of the Notice Boards. In many cases that is the end of the matter. Filled with disappointment at their first attempt, officers have possessed themselves of crayons of many colours, displayed upon the notice in such a manner that the eye of some stray passer-by may be caught.

The latter ruse has sometimes brought slightly better results. Even that, however, does not seem sufficient, for the ignorance of the general College public respecting information, good, bad, or indifferent, which is to be found on the Notice Boards, is simply appalling.

What is the object of a Notice Board ? It seems to us that the prime object is for the displaying thereon of Notices. And what are Notices ? It would seem to us that Notices are written, painted, printed, or typed collections of words, phrases, or sentences calling attention to some event which is to take place in the future, or some matter of interest which has already become history, or the placing on record of some regulation for permanent reference. In many cases Notices on the Notice Boards are the only practical means of communication between the officials of the various College societies and the general student body, and the successful carrying on of activities in the College can only be assured in the fullest sense if Notices displayed are perused and subjected to a process of intellectual digestion.

The meetings of the various societies should be effectively called by a Notice on the Board ; anyone who has had

experience in such matters knows perfectly well, however, that a notice without individual canvassing is quite inadequate.

There are students who make it their business to read the Notice Boards systematically. Most of us, however, do no such thing. We need to be knocked down with a bludgeon, handcuffed securely while in a state of insensibility, brought back to consciousness by the application of strong ammonia, led by a chain to the Notice Board, provided with a lens of known magnifying power, and our heads temporarily placed in a plaster of paris cast until the full contents of the Notice Board have become clear to us. Then it dawns upon us that something has happened or is about to happen.

We must make good the defect regarding neglect of notices, or the life of student officials will not be worth living.

If no alternative can be found, we must call in the aid of the Chief Engineer and persuade him to blow the whistle at the power house a stipulated number of times for each new notice which is to appear. We can then follow that up by providing half a dozen stalwart freshmen with bells whose capacity for noise is beyond doubt. This phase may be supplemented by securing the most stentorian voice in the student body ; this voice, with the aid of a megaphone, to announce the reason for all the noise.

By this time there might be some reason for believing that a notice would be read. We sincerely hope, however, that the College societies will not be put to this needless expense, nor the student body be subjected to such nerve-racking experiences.

Let us then take time by the forelock and read, mark, and inwardly digest—the Notices.

WRITING HOME.

Fellow students ! are you writing home ? Are you still thoughtful of those dearest and nearest to you and to whom you owe your presence here in this College of ours ? Do you see that every week at least there goes to them a letter which shows them that there still remains that love of childhood days for father and mother, and the memory of " Home, Sweet Home " ?

Many of us must probably feel that we are neglectful in this regard, but let us hope that it is not purposeful. Down in the bottom of our hearts we love them still. Can we ever forget the tender memories of our mother's voice as she sang us to sleep, or as she watched over us when ill ? Can we ever forget how sympathetic she was when we told her our troubles or asked her to share in our childish joys ? No, I do not believe we can, and may they long remain as pleasant recollections of our youthful days, and spur us on to become such men as to be worthy of the confidence and trust which every mother has in her boy.

And when we are writing to mother, don't let us forget father. Back there at home he is toiling and working that we may be better fitted for the battle of life than he was. He wants us to have the opportunities which he may not have had, and which he may not now obtain. He, too, is trustful of us and waits with eagerness to see us make our mark in the world. He may not say very much sometimes, but when we need him he is always there, willing to advise, and willing to aid us in any possible way.

So, fellows, here's to father and mother. Let us write to them and let them know we are still in truth, *their boys*, and that although we may be separated by many miles, that our hearts still answer to the magic call of " Home, Sweet Home."

Write Home.

BEST WISHES TO OUR READERS.

When this issue of the MAGAZINE appears before our readers, thoughts of Christmas and its festivities will be uppermost in their minds.

We express the wish, on behalf of the MAGAZINE Board, that the happiest thoughts and the most alluring visions which you may have of this occasion may be fulfilled, and therefore without further delay we take great pleasure in wishing you all a very *Merry Christmas* and a *Happy New Year*.

PLEASE NOTE THIS.

Copies of this MAGAZINE may now be obtained at Chapman's Bookstore, Peel Street, Montreal, where they will be on sale after each issue is published, at the usual price of 25 cents.

Don't forget to subscribe to this MAGAZINE. It needs your support and you need it to keep you in touch with the College and its activities. We have very heavy bills to meet and every dollar counts.

Please remember that it is what you do, not what you say, that counts. You may be awfully good on the talk but mighty poor on the walk. Be a person of action, a booster and not a leaner or a shirker.

EXCHANGES.

Since the publication of our last issue the following copies of other magazines have been received:—*The Alumnus*, the *Victoriana*, the *Connecticut Campus*, the *McGill College Daily*, and a new friend, the *A. H. S.*, of Moncton High School, New Brunswick.

We also beg to acknowledge with thanks another number of the *O. A. C. Review*. We are receiving very few magazines this year, and we cannot understand the reason, for we have a large exchange list and send out our

MAGAZINE to them all. If our exchanges do not receive our publication they will confer us a favor by letting us know, and we will see that matters are rectified.

Other useful publications received since last issue are the *Labour Gazette*, the *Agricultural Gazette*, *Bulletin of Foreign Agricultural Intelligence*, a pamphlet on Foot and Mouth Disease, and many other interesting bulletins.

A LETTER FROM ONE OF OUR BOYS

The Royal Highlanders of Canada, No. 2 Co., 13th Provisional Batt.

Westdown, South Camp,
Salisbury Plain, Wilts.,

Nov. 11, 1914.

DEAR DR. HARRISON,—As a member of the First Canadian Expeditionary Force and of Macdonald, I wish you all greeting.

Since leaving the College last summer my experiences have been many and varied. With regard to our sojourn in Valcartier and our trip across the sea, I suppose all experiences have been published in the papers, so I will not dwell on them. Personal impressions are that the men brought over are excellent material if handled in the right manner, as they are constitutionally fit and of more than the average intelligence. This refers to the rank and file. What we lack most are officers and non-commissioned officers with experience and an idea of the way to enforce proper discipline. Things appear to me rather lax, and the way that blunders repeatedly occur with regard to camp management is not above criticism. Papers are lost time and time again, and such things as pay assignments and medical certificates have been repeatedly lost, but things are improving and we are getting licked into shape fairly quickly.

We are well looked after as regards equipment and rations; the quality of

the latter is hardly what I am used to, and I often wish I was back on my four dollars a week billet at the College.

As soon as we struck this place we started the new system of platoon drill and discarded the old methods. We are going ahead very well with it, and we are being worked harder each week—five hours' parade every day, three route marches per week and a night march as an extra in full marching order with pack.

We have brigaded with us, under Brigadier Turner, 48th Highlanders, Toronto, 1st Montreal (Grenadiers and 65th).

H. M. The King, Lords Kitchener and Roberts have visited us here—Lord Roberts twice—and our expectations for going forward to France among the first are very keen.

Lord Kitchener is making piteous appeals to the manhood of England to join and get his army up to strength. I do not know what has come over some of the youth of this country—they have been spoiled by too much luxury and do not realize the situation.

I am proud to let you know that D. Lothian, Bert Matthews, Hart, Rod. Kennedy and McClintock are all with us, although scattered over the plains, and are flourishing; the rest of the Macdonald employee in this contingent are also fit.

I got three days' London leave and saw my parents and relations. London is very quiet and unchanged. At night it is barely lighted. People are optimistic with regard to the issue and I

think the Germans have now got to fight on the defensive. I expect you are a keener observer of the tactics and a more competent judge. One great thing struck me when we reached this country and that was the lieing and exaggerated accounts in the Canadian papers.

While away I met a wounded fellow from the Mons battle; he said it was simply fearful. They retreated in the usual manner in bunches of 20 and 50, and were lucky if only five returned intact. The German artillery is magnificent, and when they have the range never miss.

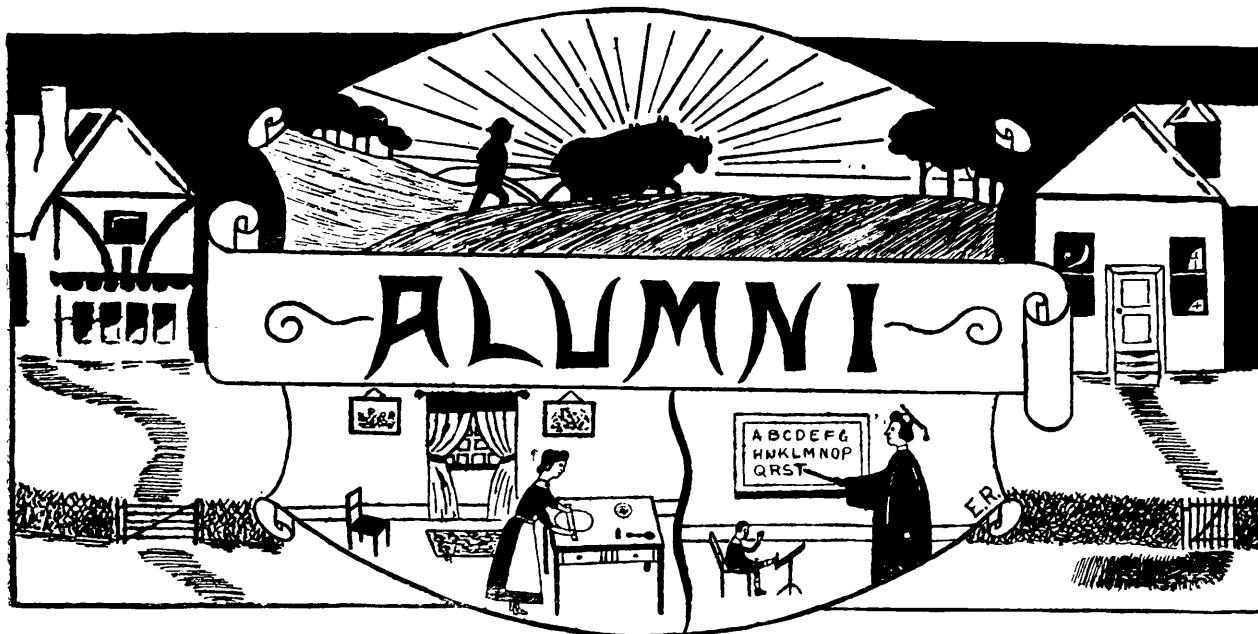
And now I turn to thoughts of Macdonald. Sergt. Maj. Sharpe tells me you are doing successful work at the College in military lines, though time is very limited—physical training being, in a measure, supplanted. I only hope that we will get some more of the fellows over here, but it is no snap. I am quite used to being out in pouring rain and seas of mud, sleeping in wet clothes, etc., but it is nothing compared to the discomforts of the field, and the only thing that bucks us up is the assurance that the principles at stake will be perpetuated after they have been gained.

I am just beginning to appreciate the dear Girls under your charge. I rather miss them sometimes.

Kindly remember me to Mrs. Harrison and all the Faculty and Staff with whom I came in contact.

I remain, sincerely yours,
(Signed), CORP. HUGH REGINALD BAILY.





SCHOOL FOR TEACHERS.

Miss Gwen Norris, Class '14, is teaching in the Earl Grey School, Montreal.

Miss Catherine McIntosh, Class '13, is teaching in the Huntingdon Academy this year.

Miss Hazel O'Connor, graduate of Class '14, is teaching in the Belmont School, Montreal.

Miss Frances Remick, Class '14, is teaching in Ayers Cliff, Que.

Miss Connie Brennand, Class '13, is assistant principal in Coaticook Academy

The Misses Annie and Hattie McCoy, Class '14, are teaching in the Fairmount School, Montreal.

Miss Alice Bruneau, graduate of Class '13, is teaching in Earl Grey School, Montreal.

Miss Carrie Brown, Elem. Class '15, is teaching at her home St. Louis Station.

Miss Edythe Petts, Class '14, is teaching in the King's School, Westmount.

Miss Irene Alcombrack, graduate of the Elem. Class '15, is teaching in Bedford, Que.

Miss Jessie Carter, Class '14, is teaching in a school in Port Daniel, Que.

Miss Pearl Arthur, Elem. Class '15, is teaching in Glenelm this year.

Miss Florence Aylen, Class '14, is teaching in the Riverside School, Montreal.

Miss Winnie MacGinnis, Elem. Class '15, is teaching in a school at Maughan, Alberta.

Miss Grace Bradford, Class '14, is teaching at St. Hyacinthe this year.

Miss T. Dilworth, Class '14, is teaching at her home, Lachine.

Miss Mollie Jameson, Elem. Class '15, is also teaching at Lachine.

Miss Mable Dow, Class '14, is teaching in Gaspé this year.

Miss Olive Graham, Elem. Class '15, is teaching at Brysonville, her home town.

Miss Margaret Brown, Class '14, is teaching in the Berthelet School, Montreal.

Miss Muriel Way, Class '14, is teaching in a school at Verdun.

SCHOOL OF HOUSEHOLD SCIENCE.

Miss Helen Moore, '13, is at her home in Charlottetown, and is putting into practise the knowledge gained at Macdonald.

Miss Emma Nicholson and Miss Bert Macfarlane, both of Class '14, are at their homes doing likewise.

Miss Nellie Lyster, '13, is happily spending the winter at her home in Sherbrooke.

Miss Eileen Joyce, 'Homemakers', '13, was a week-end visitor recently.

Miss Winnifred Sanderson, '14, also spent a week-end here recently.

We hear that Miss Grace Reynolds, '14, has entered the Toronto General Hospital as nurse in training.

Miss Emily Ward, '14, is making good use of her training at Macdonald, since she is keeping house for her brother who is out west.

Miss Vera Gardener and Miss Edith Scarff, both of Class '14, are doing Settlement Work in Montreal.

Miss Beryl Reynolds, '13, is teaching Physical Training in Belmont School, Montreal.

Miss Belle MacLeod, '13, is teaching Household Science in Prince Rupert, B.C.

Pax Fiat.

Great God of hosts, to Whose high throne
Our fathers' prayers rose not in vain,
In this dark hour of direst need,
We helpless turn to thee again.
And this we pray: make war to cease,
O Father, in our time give peace.

Great God of men, forgive our sin,
If in the sweep of passion's flood,
We lifted mocking hands to Thee,
And stained Thine altar steps with blood.
Have we forgotten that our foes,
Though erring, are Thy children still ?
Have we forgotten, O forgive,
The Cross upon a lonely hill ?

Great God of love, send forth Thy light,
That all the sons of men may see
The folly of this thing called war,
The barrenness of victory.
Teach us, O Lord, Thy greater plan,
Reveal the brotherhood of man.

To Thee we pray: make war to cease,
O Father, in our time give peace.

B, in Acta Victoriana.

Macdonald College Agricultural Alumni Association.

The marriage of Robert Newton, '12, to Miss Emma Read, took place on July 31st, at the home of the bride, at Montreal, Que. The bride and groom sailed immediately for Scotland and England, and while there visited several of the most important Agricultural Colleges and Experiment Stations. Mr. and Mrs. Newton reside at Woodstock, N.B., where Mr. Newton's duties as Director of Agricultural Schools for New Brunswick require his residence.

On October 21st, the marriage took place at the home of the bride, Ayers Cliff, Que., of Mr. F. S. Browne, '12, and Miss Ada Colby. Mr. and Mrs. Browne reside at 126 Irving Avenue, Ottawa, Ont.

Mr. R. S. Kennedy has enlisted for Active Service in the overseas expeditionary force. If Rod does as well in this sphere of life as he has done in some others, Kaiser Bill will know that there is at least one Englishman who is not suffering from senile decay.

Mr. C. F. W. Dreher has enlisted for service abroad in the second contingent. Well done, Bill; with your knowledge of German you should be an acquisition to the Canadian forces.

Another from the class '12 group, in the person of J. R. N. Macfarlane, has enlisted, and has been given command of a cyclists corps to go with the second contingent. "Micky" has always shown a keen interest in military matters and has had considerable training in infantry, cavalry and in signaling. We

offer him our congratulations and feel that he will do honor to his friends, his alma mater and his country, in this position.

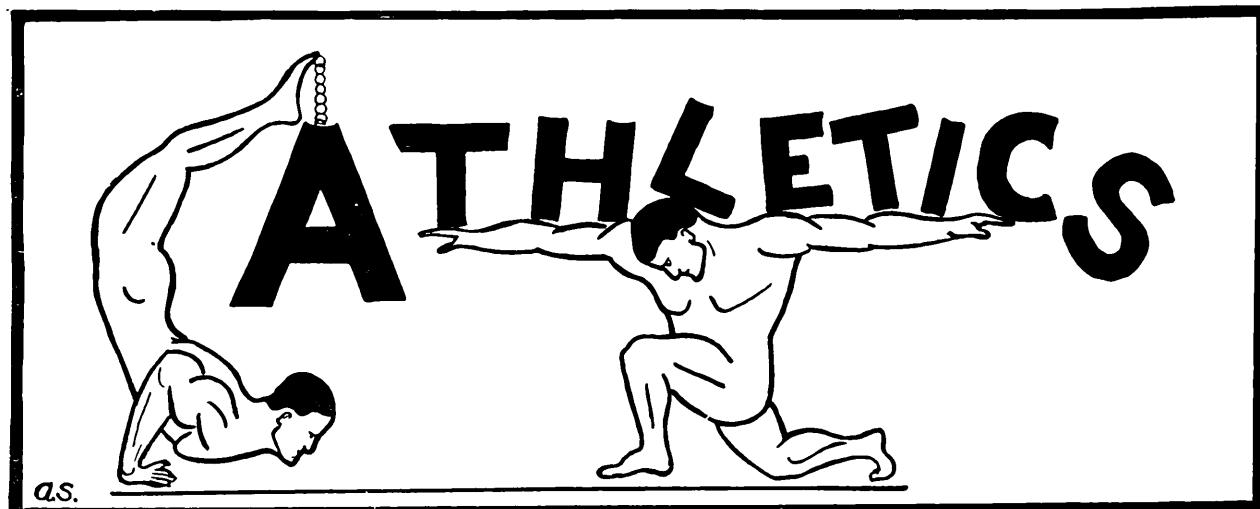
Mr. E. A. Lods, formerly of the Maritime representative of the Potash Syndicate and who, through the fortunes of war, found himself in the list of the unemployed, has been appointed Macdonald College Demonstrator for Cowansville.

Mr. A. F. Emberley has been transferred from Lennoxville to Ayers Cliff, where he has taken up work as Macdonald College Demonstrator for Stanstead County. We believe this is a happy move for Emberley, and trust that it will be so for all concerned. The Demonstration Branch is a new one, and will give plenty of scope for his talents.

We have heard of another '13 graduate, at the "haven of refuge for B.S.As." M. H. Jenkins, B.S.A., has accepted a position on the staff of the Botanical Division, at the Central Experimental Farm, Ottawa. When last heard from he expected shortly to go out on the work of inspection of potatoes for Powdery Scab.

W. H. Gibson, B.S.A., has been assistant at the Lacombe Experimental Farm since May, 1914.

Latest reports advise us that Mr. Ben. Richardson, B.S.A., '13, and his wife are the proud possessors of a baby daughter.



THE season for outdoor games has at last come to an end, and everyone is devoting their attention to the indoor pursuits, which play so great a part during the rest of the college year.

Our Rugby Team has closed its creditable career, having beaten McGill, Medicine '17, by a score of 11-7, in a game played at the College on Saturday, November 17th. The match between the College and St. Lambert's, at St. Lambert, on Saturday, October 31st, was unfortunately lost with a score of 5-9, but in this, as in the other matches, some of our men showed particular brilliance. Keen disappointment was felt at having to cancel the League match with McGill (scheduled for November 14th), owing to the extremely unfavourable weather.

The line up in Rugby was as follows:—

Flying Wing.....Wilson.

Halves.....

C. Evans.
L. Carleton.
R. Dickson.

Scrimmage.....

C. Lyster.
E. Reid.
L. C. McOuat.

Quarter.....Tilden.

Wings^{Outside.}

A. Aird.
B. Boulden.

^{Inside...}

H. Hyndman.
W. J. Reid.

^{Middle..}

R. Reid.
P. Powell.

Spans.....

B. Birks.
M. Milne.
S. Small.

Our Soccer team also is to be congratulated in having had quite successful support. The men showed excellent form both in the game against Presbyterian College, which resulted in a victory for the home team of 2 goals to 1, and also in the match against a Montreal Diocesan team, which we lost with a score of 1 goal to 0.

The line up was as follows:—

Goal.....Todd.

Full Back.....

R. Roy (left).
B. Bailey (right).

Half Back.....

G. Hay (center).
C. Crang (left).
G. Boving (right).

Forwards.....

Matthews (outside right).
Cameron (inside right).
Viane (center).
Skinner (inside left).
Bradford (outside left).

INDOOR GAMES.

A vigorous send-off was given to the indoor games by the formation of what is popularly known as a "Bum League" in baseball, in which the teams contesting were formed from a number of students who showed some interest in the game. These were keenly contested and served much in giving the game a send-off.

The Inter-year Sports commenced on Wednesday, 25th November, when the Seniors and Sophomores played their first game of baseball, which resulted in an easy victory for the Seniors of 21-6 in 5 innings.

There has been a series of matches arranged between the students and Faculty in which the result depends on the final score rather than the number of matches won. This arrangement of matches was made on account of the impossibility of the College to obtain any matches with outside teams owing to the present unsettled state of affairs. An exhibition match was played against the Faculty on Saturday, November 21st, in which the Faculty won by a large score. The first league match with the students and Faculty was played on Saturday, November 28th, at 3 p.m. The game was extremely keenly contested on both sides, there being no score made on either side during the last two or three innings, and both sides showed excellent form. The Faculty, however, again won with the close score of 13-12 runs. This match is of especial interest in that it is the first occasion on which our Gymnasium has been graced

by the presence of the ladies this year.

The line ups were as follows:—

FACULTY.	COLLEGE.
Mr. Duporte	Evans }pitchers
Mr. Gorham	Sutton }
Mr. Summerby	McCormick
(pitcher)	Presly
Mr. Raymond	Roy }
Mr. Ness (catcher)	Hay }
Dr. Savage	Ricker
Prof. Barton	Bigger
Mr. Hodge	Bradford

Gymnasium work is now only held on Tuesday nights, owing to the drill on Thursday nights, and we hope the fellows will make the best of that one night and also of the new wrestling mat, the arrival of which we are pleased to note.

In connection with the Gymnasium, we would like to state the removal of the cold air boxes in the sides under the windows, and the levelling up of the wall, will be a very welcome improvement, as the men running to first base in baseball often stand a great chance of being seriously injured.

OUR RINK.

Already everyone is beginning to discuss the Rink and the hours so pleasantly associated with it. The present conditions of the weather would promise very early skating this year, and our worthy Rink manager, Mr. Chester Lyster, popularly known as "Fat," armed with his new hammer and supply of nails, together with his untiring energy, has been devoting much time to his strenuous task. His voice, "less used to sue than to command," may be heard on Saturdays while keeping his gang in shape. We are here pleased to mention that, by the unanimous consent of the Athletic Association, it has been decided to add one board in height to the sides, which we think will be very much appreciated by everyone.

Girls' Athletics.



T a meeting held at R. V. C. of the Ladies' Basket Ball League, it was decided to start the league games on January 16th, the first game being played at Macdonald College. On account of the fact that the games must be played on neutral ground, we have been permitted to use the men's

last few minutes Section C worked up, and the game ended in their favour with a score of 16-15.

The second game, which was the most interesting and exciting game played this year, took place on Wednesday, November 25th, between Sections A and B. After a very hard fight the game ended with a tie, the score being 16-16,



Girls' Athletic Executive.

(Photo by Stroud).

gymnasium out here, and Victoria School gymnasium in Montreal.

Much to our regret, this year R. V. C. thought it best not to join the league on account of so much outside work. Although we will miss playing against them, there is a new team entering, so that the number of games will not be any less.

The first game of the Section series was played on November 18th, between C and D.

This was a very close game, but in the

but in five minutes' overtime, Section B proved the winners, the final score being 20-17.

On Section B team, Miss Leet as forward, and Miss Leach as defence, played exceptionally well.

The winner of the first game, *i.e.* Section C, played the Science team on November 30th, in which Science proved the winner by score of 30-7. Another game played on the same evening was between Sections A and D, the score being 30-3 in favour of A.

The teams lined up as follows:—

SECTION A.

M. Craven	Forward.
G. Cornell (Capt.)	"
G. Armour	Centre.
D. Cruikshank	"
E. Crutchfield	Defence.
G. Buzzel	"

SECTION B.

P. Leet	Forward.
B. M.	"
S. Hodge (Capt.)	Centre.
M. Harris	"
B. Leach	Defence.
F. Kinnear	"

SECTION C.

J. Richards (Capt.)	Forward.
Z. Prather	"
M. Travers	Centre.
E. Stewart	"
E. Scott	Defence.
M. Ramsay	"

SECTION D.

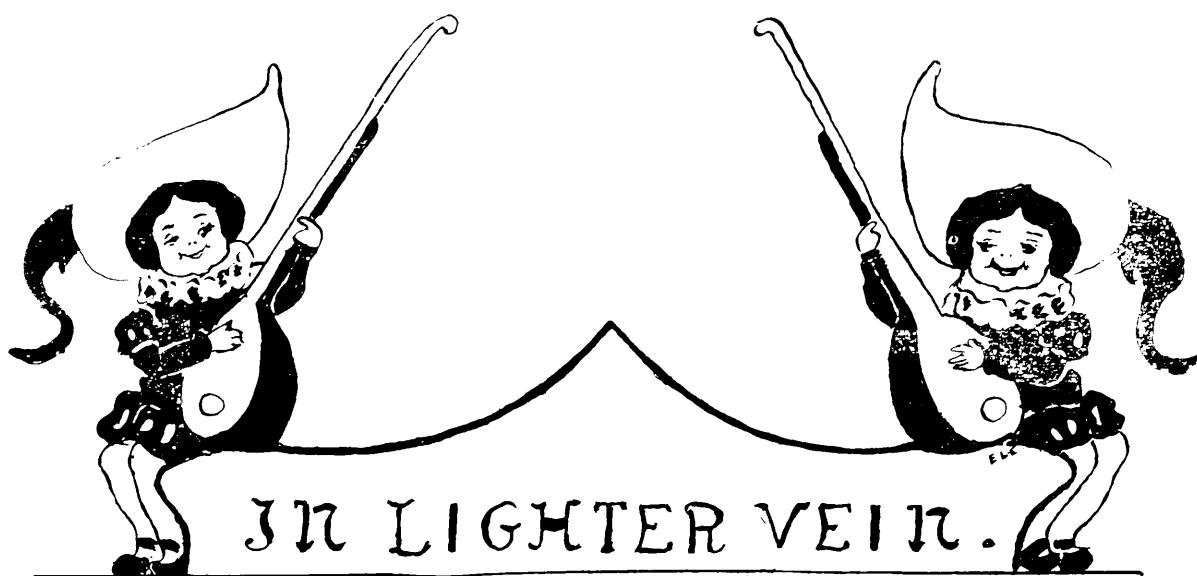
M. Annette	Forward.
B. Halcroe	"
C. Lindsay (Capt.)	Centre.
F. Byers	"
M. Atwell	Defence.
M. Hope	"

SCIENCE.

A. Reid	Forward.
E. Binning (Capt.)	"
M. Thompson	Centre.
M. Rosevear	"
A. Melon	Defence.
J. Hodge	"



The Eternal Question.



Gossip in the women's residence needs no special stamp to insure its safe delivery.

□ □ □

Looks and actions are at times really deceiving. Mr. Hodgins is a senior and not a freshman, so *have a heart*.

□ □ □

DEFINITIONS.

FLIRTATION.—The red tape through which a man has to go before he receives a kiss from his girl.

SUITOR.—A man who calls on you whenever it happens to suit him.

WEDDING.—The point at which a man stops toasting a woman and begins roasting her.

DIVORCE.—The parachute which lets us down safely after love's balloon has burst.

BABY-GIRLS.—The only women that would not crowd a courtyard to see a man hanged.

LIFE.—Lemonade slightly sweetened.

□ □ □

In a parlor there were three,
Mildred, a parlor lamp and he,
Said Jack, "Two's company, without
doubt,"
And so the parlor lamp went out.

Mr. H. (in chemistry) to Sophs: "Charcoal is a deoderising agent. Sometimes the frugal housewife will put a small piece on some meat that is suffering from old age." [Household Science note.]

□ □ □

Man has seven ages. Woman has one age, and sticks to it.

□ □ □

Bailey (to McKecknie): "Are you enamoured of her?"

Mac: "Am I an animal lover?"

□ □ □

THOUGHTLESS.

Visitor in dining-room: "What pretty maids you have here! I suppose they are all Science girls?"

□ □ □

Prof. K.: "How was it Silas Marner came to Raveloe, Miss T.?"

Miss T. (suddenly struck by a bright idea): "Why he moved there."

□ □ □

She: "Mr. Wilson, what do you do with your week end?"

Bill Reid: "He generally goes around wearing his hat on it."

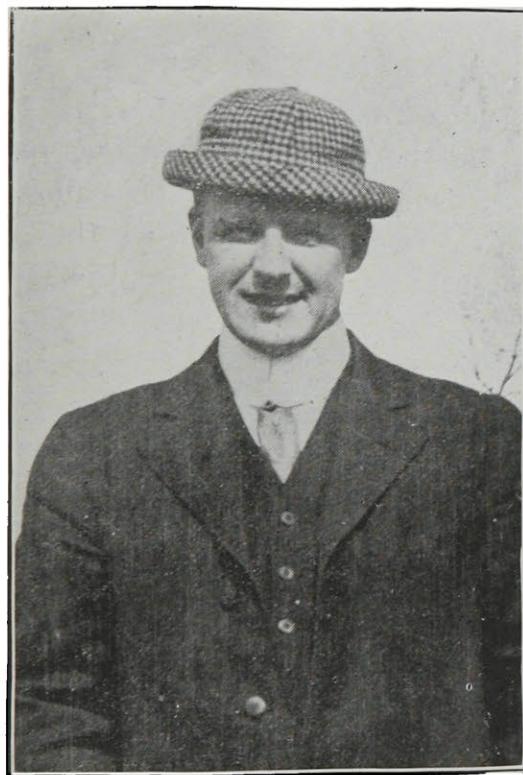
Mrs. Rutter (in Science class): "Some people use canned soup entirely. Miss Gordon, are tin cans healthy?"

Miss Gordon: "I don't know; I never ate one."

□ □ □

The Editor holds himself absolutely free of blame for any matter which may appear in these columns. At the same time he wishes to congratulate the Joke Editor on being so kind as to provide a portrait of himself for the last issue.

□ □ □



THE COLLEGE FUNNY MAN.

The naked hills lie wanton to the breeze,
The fields are nude, the groves are all unfrocked,
Bare are the shivering limbs of shameless trees,
Is it any wonder that the corn is shocked?

□ □ □

Miss B-b-eck (limping): "Oh girls, I'm getting Homemaker's knee."

DANCE ITEMS.

She (after a most fascinating waltz): "Oh! I just adore waltzing. I could waltz right up to heaven."

He: "Can you reverse?"

First He: "Don't your feet ever get sore dancing?"

Second He: "No, I dance on other people's feet."

Senior (after dance): "Do you approve of the new dancing?"

She: "No, it's a mere hugging set to the music."

Senior: "What is there about it that you don't approve?"

She: "The music."

Teacher: "How did you enjoy the dance?"

Junior: "Great, the prettiest girl in the model class gave me her first dance."

Teacher: "Yes, she told me she wanted to get the disagreeable things over with as soon as possible."

□ □ □

HEARSAY

Hyndman is reported to be taking a course in shorthand in the School for Teachers.

Presley and Evans are reported as having been appointed assistant inspectors in the Dufferin School, Montreal.

Mitchell is rumoured to have gone through a lecture without falling asleep.

Elsie is supposed to have a good reason for the cultivation of his pompadour:

□ □ □

He: "I had nothing but praise for the patriotic concert."

She: "So I noticed when you passed by the collection box."

□ □ □

Elsie McO. (after coming from Bacteriology): "Kiss me, girls, I'm sterilized."

McCormick at table noticing napkin ring: "Oh, look at Mrs. Leet."

Next door neighbour: "Why Mrs. Leet?"

McCormick: "Because it is mother-of-pearl."

□ □ □

I am an aviator
And can soar to any height;
But it sure does dip my warping planes
To hear a girl called "kite."

I am no horticulturist
But nearly have to screech,
Because he calls a girl he knows
A darling little "peach."

I pine not to bring others woe—
I trust I'm not so mean;
But I would like to swat the bo
Who calls a girl a "queen."

I do not pine for human gore,
Yet boldly I assert
I'd like to slap the brainless yap
Who calls a girl a "skirt."

Judging from the hours that some aggies keep, they will make better milkmen than agricultural advisers.

□ □ □

OBITUARY.

Sadler does not believe in the *word* "fussing" (I did not say that he does not believe in fussing, for we all know that he is a bear at it), but to get back to the point, we must congratulate Mr. Sadler for the stand he has taken. Webster's definition of the word fussing is entirely different from that of ours, if my understanding is correct. To fuss (in the words of Webster) is to bustle and flurry. Now, in reality, we do not go out walking with a girl, or call on her to bustle or flurry her—just the opposite. If she thought we did, we'd all get the farewell. So in the name of the girl you love, your own reputation, and that of the English language, let us erect a monument in commemoration of the passing from now and forever more of that word *fussing*, which has been so terribly abused at Macdonald College.





In Nature's Garb.

The County of Pontiac.

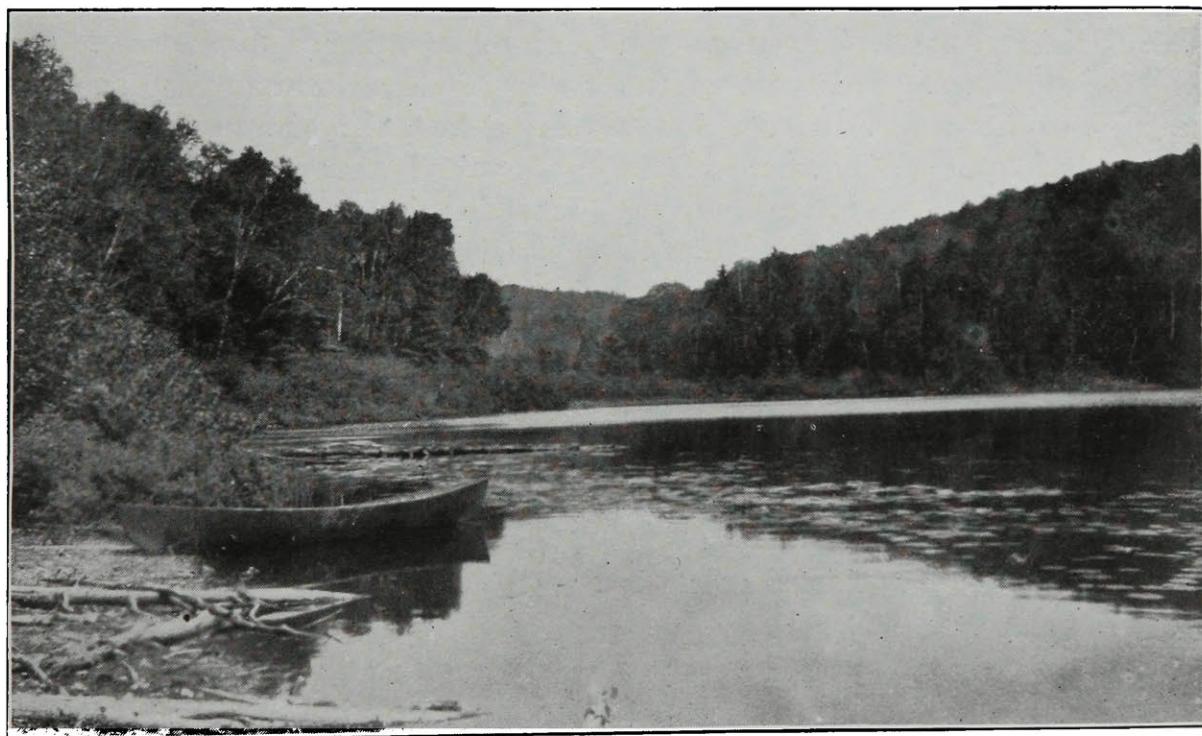


OLLOWING up the idea of having an article on some county in the Province appear in each issue of the

MAGAZINE, the managing board has requested me to write something about the County of Pontiac. It is often amusing and at the same time annoying to hear the ideas that the majority of people outside the Province hold regarding Quebec. The MAGAZINE is to be commended for its efforts in trying to correct those false impressions.

twenty times the area of Argenteuil, fifty times that of Huntingdon, and one hundred times the area of Vaudreuil.

The county is rich in natural resources. Her mighty water powers on the Ottawa, namely, Chats Falls, Portage du Fort Falls, Calumet Falls, and Coulonge Falls, are all waiting,—a million horse power strong,—to be harnessed and turned to man's advantage. Within her boundaries rivers rise and flow their whole course before emptying into the



This illustrates the Nature and Picturesqueness of the Land in Upper Pontiac.

If one examines the map of Quebec one will see that the County of Pontiac occupies a large portion of the western part of the province. It has the distinction (with perhaps one exception) of being by far the largest county in the province, its area being almost twenty thousand square miles, or thirteen million acres. Comparing these figures with some of the other counties in the province we find that Pontiac has

Ottawa. Within her borders are great lakes, the joy of the fisherman, and the last hope of the hunted moose. From her mighty forests of the Upper Ottawa come annually millions of feet of Canada's best pine. For two hundred miles the county fronts on the Ottawa River, the route of the proposed Georgian Bay Canal. Near Lake Abitibi rich finds of gold and silver have recently been made, while iron and

mica have been discovered in several places in the county.

At the present time agriculture is confined to that part of the county lying between the Ottawa River and the Laurentian Range, and known as the Ottawa Valley. This strip of arable land varies from ten to thirty miles in width and includes the townships of Onslow, Bristol, Clarendon, Litchfield, Oldfield, Thorne, and Mansfield, as well as Calumet and Allumette Islands. The people of these townships are practically all of Scotch and Irish extraction and combine the native thrift and geniality of the two countries.

Away in the north of the county, on the banks of Lake Temiskaming, is a big French settlement, known as the Ville Marie district. This part of the county is quite isolated from lower Pontiac, but is quite easily reached from Cobalt and New Liskeard on the other side of Lake Temiskaming. Visitors to this district are always surprised to find that the buildings, farms and roads in this part of the county will compare very favorably with those in some of the older settled parts of the province. Since the building of the National Transcontinental Railway across the north of the county this district is filling up fast, and bids fair to soon have as big a population as lower Pontiac.

For provincial purposes the county has recently been divided into Temiskaming, or Northern Pontiac and Lower Pontiac. Owing to the fact that Quebec cannot increase its representation in the Federal House the county has only one member at Ottawa.

Bryson, a small picturesque town on the Ottawa, is the county town. Shawville, situated on the C. P. R. forty-five miles west of Ottawa City, is perhaps the chief business centre, while Quyon, Portage du Fort, Campbell's Bay and

Fort Coulonge are all towns of more or less importance.

It is only during the last fifteen or twenty years that agriculture has been counted of prime importance in the county. Up to that time lumbering was the chief industry, and farming was more or less of a side line. The farmers counted the days until they could get away to the lumber woods in the fall, and many and interesting are the stories that the older settlers can tell of shanty life in those days. Timothy and oats were the chief crops grown on the farms at that time, and these were hauled off the farms during the winter to supply the lumbering concerns. Happily this soil depleting system has become the exception rather than the rule.

The soils of Pontiac vary from heavy clay next the river front, to sandy loam and gravel near the mountains. This variation in the soil has of necessity caused a variation in the types of farming followed. Bristol and Clarendon townships are particularly noted for their good live-stock, some men having very creditable herds of Shorthorns, Holsteins, and Ayrshires. Some exceptionally good Clydesdales are to be found.

Dairying is carried on quite extensively in the front of the county, most of the milk at the present time being manufactured into cheese. Quite a few of the farmers, however, are beginning to send their cream to Ottawa, and this trade will no doubt increase when the new C. N. R. line is completed along the front of the county. The cow-testing association formed in the county two years ago is also proving an incentive to the farmers to improve their dairy herds.

Beef-raising and sheep-raising are carried on to a large extent all over the county. Shawville is a noted live-stock shipping point, from three to five

cars of stock, on the average, being shipped from there every week during the summer and fall. Campbell's Bay, McKee's, and Quyon also ship corresponding amounts.

Pontiac was fortunate in being one of the first counties in the province to have a district demonstrator. Mr. J. K. King, the present representative, is at Shawville, and is doing good work. In conjunction with Macdonald College, Mr. King runs short courses at several points in the county each winter. It was largely due to his efforts that the government power ditcher was sent into

and its history is in many ways the history of agriculture in the county. The Annual Fair is held at Shawville, and is one of the "big events" of the year. Shawville Fair is noted for its fine exhibit of live-stock, particularly heavy horses and dairy cattle. The Society is on a sound footing financially, and has good grounds and buildings.

Pontiac Agricultural Society No. 2 holds its exhibition at Chapeau each year. This society also is quite progressive, and is well supported by the farmers of that district.

Contrary to the general belief that



Buildings on one of the Better Farms of Lower Pontiac.

the county last year. The farmers are quickly realizing the benefits of under-drainage, and are keeping the ditcher busy. The Pontiac Central School Fair held at Shawville last September also owes its existence to Mr. King and Macdonald College. This fair was a decided success, twenty-seven schools taking part, and from these schools three hundred and twenty-four children showed material, making a total of fifteen hundred exhibits.

The people of Pontiac are rightly proud of their agricultural societies. Pontiac Agricultural Society No. 1 has been in existence for almost sixty years,

it is impossible to get farmers to co-operate, the county has several real live co-operative associations.

The Pontiac Wool-Growers Association, formed last year, has a membership of over one hundred sheep-breeders. The prices that the farmers realized for their wool through this association were considerably in advance of the regular market prices. This organization will undoubtedly encourage sheep-breeding in the county.

The Pontiac Rural Telephone Company, organized two years ago, is a concrete example of what farmers can do when they work together. This

company has now over one hundred miles of first-class lines, and owns its own centrals. The system is giving good satisfaction, and will soon reach every point in Lower Pontiac. The cost is much less than a similar service would be from a privately owned company.

While there is still room for great improvement along almost any line of agriculture in the county, on the whole the people are progressive, and are try-

ing to adopt new ideas and improved methods as soon as they present themselves. The beautifying and building of better homes, the rural telephone, rural mail delivery, the parcel post, farmers' organizations, and the women's institutes are all factors that are tending to make farm life in Pontiac more pleasant and its people happier. Truly the future looks bright for Pontiac.

E. L. HODGINS, Agr., '15.

Our Maple Industry and its Prospects.

By Prof. J. F. Snell.



OMPARED with field crops or live stock, maple sugar is, of course, a minor product of Canadian agriculture.

This obvious fact, together with the small share of the farmer's attention which the crop of the maple commands, has a tendency to conceal from the casual observer, the substantial importance of this product in the two provinces of old Canada. An annual production valued at over two and a half million dollars is not one to be despised, and an industry which yields such a harvest and is capable of yielding twice as much is surely worth fostering. Its importance reaches its height in this province of Quebec, which claims two-thirds of the total output of the Dominion. According to the census of 1911, the production of maple syrup and sugar in this province amounted to a value of \$1,680,000, which is only \$28,000 less than the value of the poultry sold and slaughtered on the farm, nearly \$100,000 greater than the value of the sheep sold and slaughtered, over \$100,000 greater than the value of the cream produced, over \$200,000 more than the

value of the fruits, orchard and small, and no less than six times the value of our apiary products, both honey and wax.

I have said that the maples of Canada are capable of yielding twice as much annual income to their owners as they at present do. This is, I am sure, a very moderate estimate. For, in the first place, the output of the maple industry can be greatly increased by the tapping of additional trees. Probably this expedient in itself would be sufficient to double the annual production, but perhaps the shortage of agricultural labor will stand in the way of its realization for some years to come. In the second place, the waste of sap can be reduced by the use of larger buckets, by the use of covers and by punctual gathering. In the third place, the average quality of the product can be improved by the exercise of greater cleanliness in the handling of the sap and more care in the boiling. In the fourth place, the income from the products can be greatly increased by efficient marketing. And lastly, a slight addition to the annual income can be realized by the saving of the sugar sand.

Every maker of maple syrup and sugar should have a copy of Bulletin 2B of the Dominion Department of Agriculture, "The Maple Sugar Industry in Canada," by J. B. Spencer, B.S.A. Every maker should also become a member of the Pure Maple Syrup and Sugar Co-operative Agricultural Association, of which Mr. J. H. Lefebvre, Waterloo, Que., is Secretary-Treasurer. This Association not only assists its members in the marketing of their product, but also holds meetings at which matters of interest to sugar-makers are discussed, and distributes an annual report of these meetings. It is also the medium through which the collective views of sugar-makers are presented to our Provincial and Federal Governments. The amendment to the Adulteration Act, prohibiting the use of the word "maple" on any but genuine maple syrup and sugar, is the fruit of the efforts of the Association. It is hoped that this amendment, which is now in effect, will do away with much of the fraud and adulteration which have hitherto been so prevalent in connection with maple goods. The Association deserves the support of all interested in the production and sale of pure maple syrup and sugar. The greater its membership, the greater will be its influence in the interests of the honest producer.

Last year, the Hon. Mr. Caron devoted \$3,000 of the Federal Grant for the encouragement of Agriculture to the interests of the maple industry. Three sugar schools were established at which instruction was given to seventeen resident students, and nearly sixteen hundred visitors. The sum of \$500 was granted to the Co-operative Association for the furtherance of its work. The Minister also showed his appreciation of the value of advertising by making provision for the distribution of samples of maple sugar to travellers on Dominion Day.

Those who have mastered the art of

producing good maple syrup and sugar should turn their attention to the question of marketing. For it is at this end of the business that the greatest possibilities for increased profits exist. Products put up in attractive form will command much better prices than ordinary looking goods. Small packages, neatly labelled, are in good demand. The manager of the Vermont Sugar-makers' Exchange estimates the demand for small packages of syrup at five times as great as that for gallon cans. There is no doubt, also, that it would pay our sugar-makers to engage in a campaign of co-operative advertising. Many who do not use maple syrup would buy it if it were more frequently brought to their attention. Our western provinces offer a good field for expansion of the trade. Something has been done during the last year towards creating a trade in England. And next year, the greatest market of all for maple syrup and sugar, the United States, will be thrown open to us by the removal of the present duty of four cents a pound—a market of ninety million persons, who spend annually two hundred and fifty million dollars upon confectionery, who have an inherited or, at any rate, an established taste for maple syrup and sugar, and whose home production provides only half a pound of sugar per head of population.

Chemical manufacturers have become interested in maple sugar sand as a source of malic acid and its derivatives, and there will be a demand for the well-prepared material this year. Maple sugar sand for the market must be well washed and well dried. Otherwise it will soon spoil. It is a shame to waste material which is so easily put into a marketable condition.

In view of these things, the prospects of the maple industry appear to me very encouraging, and I look forward confidently towards the future of this branch of Quebec agriculture.

Are Our Winters Getting Warmer?



HERE is no doubt that to a certain extent the control of weather is not a dream of the future but an accomplished fact. Advance of civilization and new methods of farming are the chief agencies which have influenced to a greater or lesser degree weather conditions.

All towns affect the climate of their immediate districts to an extent in proportion to their size ; for instance, it is a well-known fact that the temperatures of all large cities are many degrees higher than in the open country. This is not only due to the buildings sheltering the district from cold winds, but also to the fact that the ground is so thickly covered in that evaporation of heat is very slow.

Another important factor which helps to raise the temperature is the result of artificially draining the land. During the last thirty years much marsh land has been drained in this country, and since dry soil is always warmer than wet, it is obvious that the lack of excess moisture of large areas of land would have some effect upon the temperature of the air. And since artificial drainage is being practised more and more, it seems that this influence on temperature will increase.

The breaking up of the vast prairie lands in the west is having a marked effect on the climate ; and we find the more the land is broken up and cultivated the more even the temperatures become. The obvious result of this is that the summer frost line—the great dread of the western farmer—is being pushed back further north every year. In proof of this an authority may be quoted who says that twenty-five years ago summer frosts in Manitoba were expected as an inevitable event, and the

farmer speculated as to how much his crops would be damaged, but now summer frosts are a thing of the past, the farmers scarcely worrying at all on this account. In the same way as the minimum temperature is increased in the summer, so also it is in the winter. Low temperatures recorded by pioneers in the old days are now not experienced. Some importance must be attached to this matter of raising the temperature, because between us and the Arctic regions there are vast tracts of bog and marsh land which, owing to their dampness, are continually cold or frozen, and which, if they were drained, would make a difference in the climate and consequently push further north the line where profitable farming could be undertaken.

There is one other great factor which has a definite influence on the climate of our country, and that is the presence of forests. Not only do trees have a cooling influence, but they increase the humidity of the atmosphere by reason of evaporation from their leaves. This moisture ultimately falls as rain. Now, in Canada, the destruction of forests has been great, and the consequence is that the yearly rainfall in many districts has decreased, thus again tending to raise the temperature.

Although it does not directly concern our subject, this naturally brings to our minds the interesting results obtained from irrigating dry sections of country which, owing to the new growth of vegetation, has now changed the climate to such an extent that irrigation is almost no longer necessary. This is amply shown on the Nile, where irrigation has been carried out on such a tremendous scale.

G. F. COLLINGWOOD, Agr., '16.